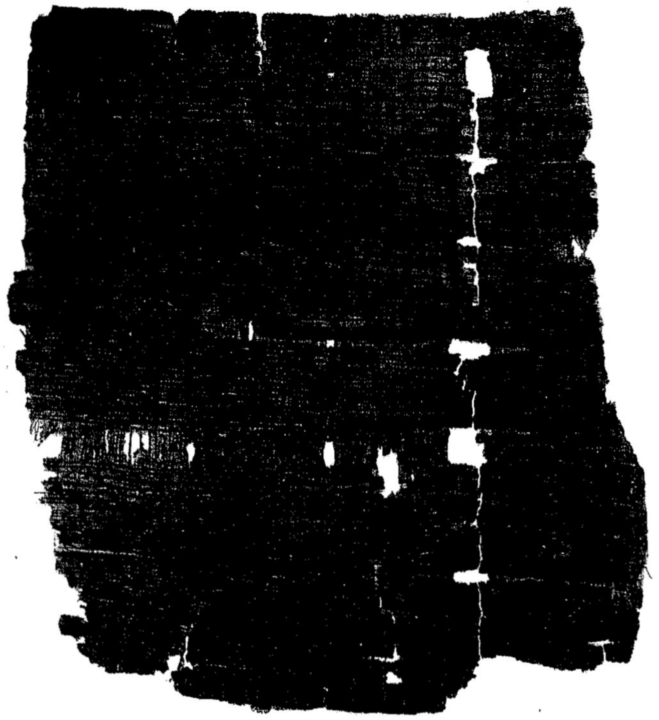
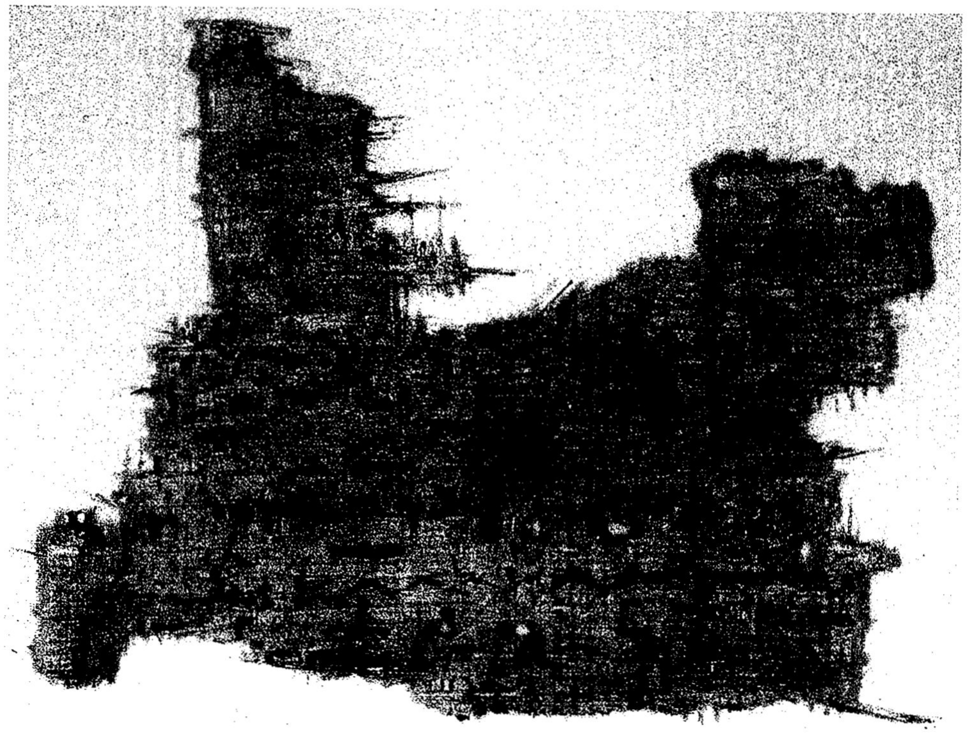


1. Pap. Vienna G 2315 (No. 3)



2. Pap. Leiden 510 (No. 4)

Documents of Ancient Greek Music

The extant melodies and fragments
edited and transcribed with commentary by

EGERT PÖHLMANN AND MARTIN L. WEST

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PREFACE

The ancient Greek system of musical notation was not highly regarded in antiquity.[1] Aristoxenus condemns it as a banausic skill, too defective to form part of serious musicology.[2] The Alexandrian scholars seem never to have used it, but to have produced text-only editions of the lyric poets.[3] Varro does speak of the notation as if it was something generally familiar,[4] but Quintilian, for all his high esteem for the role of music in the orator's education, excludes the use of notation from his programme.[5] It is in accord with this that the treatises to which we owe our knowledge of the ancient notation are all of later date.[6] Clearly the technical side of music-making remained for a long time beneath the dignity of literature.[7] Nevertheless, a series of documents of Greek vocal and instrumental music has been preserved in inscriptions and medieval manuscripts and above all on papyrus. They extend in date from the fifth century BC to the fourth AD.[8]

The present collection of all the ancient musical scores so far known is not published with the intention of providing materials for the reconstruction of the sound of ancient music. To say nothing of the fragmentary condition of most of the pieces, such an endeavour is precluded by the nature of the ancient notation. Its transcription onto the modern stave is indeed straightforward, once one has settled on an appropriate pitch level. But everything that comes under the heading of 'performance practice' remains open to question: intonation, tempo, vocal forces, tuning, the form of the accompaniment.

The significance of the fragments here assembled is rather that they provide answers to a number of philological and music-historical questions that would otherwise remain insoluble. Following the chronological sequence of the fragments, we observe how a rhythmical notation develops to supplement the pitch notation. We can see how classical enharmonic scales are later displaced by chromatic ones, and how these are enriched in the later Hellenistic period by semitone accidentals which bring us closer to the modern concept of chromaticism. In the Roman period diatonic scales predominate. On the other hand, the taste for melisms, which already appear in the fifth century BC (no. 3), grows continually as time goes on; one of the latest pieces (no. 59), a fragment of a Christian hymn, already hints at the melismatic psalmody of the Middle Ages. Collectively, the fragments make it possible to establish the pitch level at which the ancient notation is to be read.

There are texts here that make an important contribution to our knowledge of the cultic and dramatic poetry of the Hellenistic and Roman periods, perhaps even some from the fifth century. There is a change in the matter of word setting: the older, strophic texts pay no regard to the word accents, whereas in and after the later Hellenistic period there is concern to reflect the word accent in the melodic line. Reconciliation of the attested melodies and rhythms with modern conceptions remains a goal that musicology has not fully achieved.

---

[1] West 2 (1992), 254–76; Pöhlmann (1997).
[2] Aristox. *Harm.* 2. 39 f.
[3] Pöhlmann (1994), 23 f., 32.
[4] Varro *GrRF* 282. 109 ff.; in general, Wille (1967), 489–91.
[5] Quint. *Inst.* 1. 12. 14; Marrou (1946).
[6] Pöhlmann (1995), 1657–63.
[7] Pöhlmann (1998).
[8] West 2 (1992), 277–326.

The greater part of the fragments contained in this book (nos. 3, 8–18, 20–1, 23–40, 42–3, 50–2, 59) comes from E. Pöhlmann's *Denkmäler altgriechischer Musik* (1970). Those sections were revised by both editors and translated into English by M. L. West. The new fragments (nos. 1–2, 4–7, 19, 22, 41, 44–9, 53–8, 60–1) were contributed by West and partly revised by Pöhlmann.

Ulrike Wagner-Holzhausen devised the fonts for the Greek notation, prepared the camera-ready copy for the whole book with the assistance of Ines Kindervater, supplied the files for all illustrations, and contributed many valuable observations on Pöhlmann's *Denkmäler*.

The provision of photographs of every fragment would have been a wonderful boon to the reader, if an expensive one. We decided that we could reasonably omit them in cases where images are of relatively easy access in the volumes of *The Oxyrhynchus Papyri* (nos. 38, 44–9, 53–9), in the *Zeitschrift für Papyrologie und Epigraphik* (nos. 5–6, 17–18, 50–2), or on the Internet (nos. 42–3, 61), and also in the case of the Delphic Paeans (nos. 20–1), which are excellently reproduced in the recent edition by A. Bélis (1992). We have included images of everything else.

For information, support of various kinds, and permissions to publish we thank the Papyrologisch Instituut of the Rijksuniversiteit at Leiden (Frontispiece), the Österreichische Nationalbibliothek in Vienna (Frontispiece, figs. 6–13), the British Museum (fig. 4), the Egyptian Museum in Cairo (fig. 5), the Beinecke Rare Book and Manuscript Library at Yale (fig. 17), Mr. Martin Schøyen (fig. 18), the British Library in London (pl. 1a), the National Museum in Copenhagen, Antiksamlingen (pl. 2), the Biblioteca Nazionale di San Marco in Venice (pls. 3–4, 8–9), the Bibliothèque Nationale in Paris (pl. 5), the Biblioteca Nazionale in Naples (pls. 6–7), and the Universitetsbiblioteket i Oslo, Papyrus collection (pl. 10).

Scholars who wish to cite texts from *Documents of Ancient Greek Music* are recommended to use the abbreviation *DAGM*.

Erlangen
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August 2000

E. Pöhlmann
M. L. West

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INTRODUCTION

The most important source for ancient literature, manuscript transmission, is unavailable for ancient music except in the case of a few chance items, which owe their survival solely to the circumstance that they found their way into a corpus of musical theory. Thus the Mesomedes hymns, which were published as early as 1581 by V. Galilei, are transmitted as an appendix to the treatise of one Dionysius (nos. 24–31). Excerpts on music theory are the source of the 'Hormasia', first published in 1588 by Gioseffo Zarlino, which wrongly came to be included among the musical fragments.[1] The six instrumental pieces at the end of the anonymous musical theorists edited by F. Bellermann in 1841 are teaching examples (nos. 32–7). That was the sum total of the genuine material available for study until late in the nineteenth century.

Not surprisingly, this situation gave rise to imaginative reconstructions of ancient music at quite an early date. We can only mention in passing the numerous manuscripts of Virgil and Horace embellished with medieval neumes.[2] In a tenth-century manuscript of Terence a verse of the *Hecyra* has note symbols added that have been claimed as Greek notation.[3] A parallel case occurs in a fifteenth-century Aristophanes manuscript, where a scholiast's hand has added note symbols to three lines of the *Clouds*.[4] In 1650 the learned Jesuit Athanasius Kircher furnished his *Musurgia Universalis* with two 'specimina musicae antiquae'.[5] And in 1724 Benedetto Marcello printed the thirteenth Homeric Hymn with Greek notation.[6]

Firm ground was finally reached in 1883 with Sir William Ramsay's discovery of 'the song of Seikilos', inscribed on a grave stele from Aydın (no. 23). Then in 1890 C. Wessely was able to publish a papyrus fragment with the musical setting of part of Euripides' *Orestes* (no. 3). This was quickly followed by two paeans inscribed on the Athenian treasury at Delphi, published by H. Weil and Th. Reinach in 1893–4 (nos. 20–1). The corpus was now of a respectable size, and C. von Jan collected the remains of Greek vocal music known by 1899 in a small Teubner volume.[7]

In the twentieth century it was papyri that brought the greatest increase. In 1918 W. Schubart published a Berlin papyrus that contained three vocal and two instrumental fragments (nos. 17, 18, 50–2). Four years later came an Oxyrhynchus papyrus with a piece of a Christian hymn (no. 59), published by A. S. Hunt and H. Stuart Jones. New collections were made by Reinach and J. F. Mountford.[8]

In 1931 Mountford published a fragment from Cairo with three incomplete lines from a tragedy (no. 8). There was then a lull until 1955, when S. Eitrem, L. Amundsen, and R. P. Winnington-Ingram brought out a papyrus from Oslo with remains of two tragic scenes (nos. 39–40).

---

[1] Pöhlmann (1970), no. 6.
[2] Cf. Wille (1967), 227 f., 253–60.
[3] Pöhlmann (1970), no. 13*.
[4] Pöhlmann (1970), no. 14*.
[5] Pöhlmann (1970), no. 15*–16*.
[6] Pöhlmann (1970), no. 17*.
[7] Jan (1895); (1899).
[8] Reinach (1926); Mountford (1929).

That was the state of the game reflected in C. Del Grande's fragment collection,[1] though he gave only parts of the Berlin and Oslo fragments and did not include the Mesomedes hymns.

He was not able to take account of an Oxyrhynchus monody fragment which E. G. Turner and Winnington-Ingram published in 1959 (no. 38). In 1965 came a Michigan papyrus, published by O. M. Pearl, again with the help of Winnington-Ingram (nos. 42–3). In a series of publications in 1962, 1966, and 1970 eight smaller Vienna fragments, which had already been mentioned by Wessely, and which are similar in date and character to the *Orestes* fragment (nos. 9–16), were finally published by E. Pöhlmann. All the material known up to 1970, apart from nos. 7 and 22, but with the spurious *specimina musicae antiquae*, were brought together by Pöhlmann in a corpus in which the items were arranged in groups according to the type of source (medieval manuscripts, printed books, inscriptions, papyri) and, within the groups, according to the date of first publication.[2]

Since then the number of authentic music fragments has grown from 35 to 61. In 1945 L. Robert published an inscription fragment from the sanctuary of the Carian deity Sinuri at Mylasa (no. 22). In 1955 Turner published some scraps of a Hibeh papyrus, from a treatise on music which contained some examples in notation (no. 7). In 1973 D. Jourdan-Hemmerdinger presented a provisional reading of a Leiden papyrus containing lyric excerpts from Euripides' *Iphigeneia at Aulis*, one of them with notation surviving (no. 4). Three years later M. W. Haslam brought out two Oxyrhynchus papyri with tragic fragments (nos. 53–5). In 1980 M. T. Mitsos published a fragment of a hexameter hymn to Asclepius from an Epidaurian inscription, the first line furnished with notation (no. 19). In 1984 A. Bélis drew attention to an epinetron of the Sappho Painter in Eleusis, showing an Amazon blowing a trumpet and a series of syllables representing her fanfare (no. 1). In 1986 Haslam published two more Oxyrhynchus fragments with notation (nos. 44 and 56); the latter piece has turned out to be a line from Menander with four different musical settings. In the following year M. L. West drew attention to a passage of Dionysius of Halicarnassus and to a scholium which provide some scraps of information about the music of the parodos of Euripides' *Orestes* (no. 2). In 1998 he published seven Oxyrhynchus papyri with musical notation (nos. 45–9, 57–8), and in 1999 a group of fragments of earlier date, some of them apparently belonging to a tragedy by Sophocles (Junior?) (nos. 5–6). In 2000 W. A. Johnson published papyri from Yale (no. 41) and Michigan (no. 61). We are also able to include a papyrus from the private collection of Martin Schøyen, which is to be published by Rosario Pintaudi together with the other papyri in the collection (no. 60).

Pöhlmann's *Denkmäler altgriechischer Musik* being out of print, the editors decided to undertake a revision of the corpus with a somewhat changed plan. The 'Hormasia' and the spurious *specimina musicae antiquae* are no longer included.[3] Three appendices giving an account of the relationship between word accent and melody and explaining the Greek systems of rhythmical and melodic notation respectively could be dropped here, as West has treated those topics exhaustively.[4] The fragments have been rearranged in order of presumed antiquity, following the model of West's catalogue.[5] The text of each fragment is followed by critical apparatus, transcription in modern notation, and commentary. The Greek texts from inscriptions and papyri are printed in minuscule and generally in *scriptio continua*; those from medieval manuscripts are given with word division and accentuation. The notation is presented uniformly in majuscule. The notes are placed above the relevant syllables, and the rhythmical symbols above the relevant notes. In eight cases (nos. 8, 17–18, 42–3, 46, 50, 55) it was judged desirable to reproduce the note placing and the word and syllable spacings of the originals printing the text in majuscule. As inscriptions and papyri give musical texts without colometry, we reproduce the layout of the originals.[1] For further palaeographic details we must refer to the available photographs. Where metre and line-length can be established, *exempli gratia* supplements have in some cases been printed, but only in the transcriptions.

---

[1] Del Grande (1960), 435–76.

[2] Pöhlmann (1970).

[3] Neither are the inscriptions without poetic text which D. Themelis (1989; 1994; 1999) and Ch. Spyridis (1990; 1999) have mistakenly claimed to contain musical notation: cf. West 3 (1992) and Spyridis (1993).

[4] West 2 (1992), 197–200, 254–73.

[5] West 2 (1992), 277–326.

As a rule, the text accompanying the musical transcriptions has been divided into syllables without regard to the norm of Greek syllabification in order to distinguish metrically open and closed syllables. In the musical transcriptions the Greek note C (vocal and instrumental) has been equated with our *a* according to the usual convention established by Bellermann, although it is agreed that this sets the whole system too high by about a minor third.[2] To indicate quarter-tone intervals the symbols ↓ and ↑ have been used; other nuances of intonation can only be described in the commentary. The rhythmical values in the transcriptions follow the metrical values of the syllables unless the rhythmical notation calls for something different. Short syllables are represented as quavers, long ones as crotchets, no distinction being made between *longum* and long *anceps*. Notes whose rhythmical value is unknown have been transcribed tailless, and conversely where the rhythm but not the melodic line is known, headless notes have been used. Bar lines have been used to mark off metrical units where appropriate. Melodic lines have been supplemented only in isolated cases. The transcriptions are to be understood purely as guides and should be used in conjunction with the transliterated originals. Where keys are named, the Alypian system of transposition-scales is presupposed. Further questions are discussed in the commentaries to the individual fragments. For other matters, and for introductions to ancient metrics, rhythmics, and music, we may refer the reader to our own relevant publications.[3]

The bibliography is limited to literature that we have had occasion to cite, as surveys of progress in the field appear regularly. Citation is by name, year, and page; if there is more than one title to an author's name in a particular year, they are distinguished by numbers.

Critical symbols

α̣	uncertain letter	.	illegible letter
Α̣	uncertain note symbol	?	illegible note symbol
[ ]	lacuna	⟦ ⟧	scribal deletion
< >	editorial insertion	{ }	editorial deletion
( )	resolved abbreviation	\` ´	addition above the line
⌊ ⌋	restored from parallel source	⌈ ⌉	editorial correction

---

[1] See below, p. 15 f.

[2] Cf. West 2 (1992), 273–6.

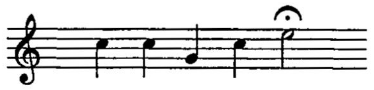
[3] Cf. West (1982); 2 (1992); Pöhlmann (1995).

No. 1 ELEUSIS INV. 907 Fifth century BC

τοτ̣η τοτοτε

This 'text' comes from a broken clay epinetron (a knee-guard for sewing) in the Eleusis Museum, first published by D. Philios in 1885.[1] It dates from the early fifth century, and was decorated in black figure. The painting, attributed to the Sappho Painter, showed several Amazons, one of whom was blowing a trumpet. Between her body and the trumpet are painted the letters τοτ̣η (reading right to left), and behind her the letters τοτοτε (reading right to left, though the ε faces towards the τ). Philios already interpreted these syllables as representing the sound of the trumpet-call.

A. Bélis[2] has attempted to interpret the syllables on the basis of the solmization system attested at a much later period, in which the degrees of the tetrachord were represented by the syllables τα τη τω τα and the disjunctive tone by τε.[3] On this basis, and reading the lower line (τοτοτε) before the upper (τοτη) (which seems unnatural), she arrived at the transcription.



It is much more likely that we have to do simply with an unsophisticated attempt to express the characteristic sound of the instrument in nonsense syllables, as in Ennius' verse *at tuba terribili sonitu 'taratantara' dixit* (*Ann.* 451 Skutsch). The dental plosive consonants perfectly imitate the tonguing technique used by wind players to give a clean start to their notes.[4]

For the naive attempt to represent music or song in late Archaic/early Classical painting we may compare three red-figure vases. On a cup made by Brygos, found at Vulci but now in Munich, a boy is represented playing the auloi next to a man who reclines on a *kline* and sings; the opening words of his song, ουδυναμου, are shown in a line coming from his mouth.[5] M. Wegner has collected similar examples.[6] On another vase in Munich, a kalathos from Agrigento,[7] the Brygos Painter has depicted Alcaeus and Sappho, and from Alcaeus' mouth, as K. Schefold has noted,[8] proceed five small circles to suggest his singing. The motif recurs in a school scene on an early Classical hydria from Camirus, now in London:[9] a teacher with a barbitos sits in the middle, faced by a pupil who plays the auloi, and, as Henry Beauchamp Walters observes, 'four notes represented by circles or O's issue obliquely from his [the teacher's] mouth'.[10]

---

[1] Philios (1885), 175–7. See fig. 1.

[2] Bélis (1984).

[3] Arist. Quint. 77. 30–81. 6; Anon. Bellerm. 9–10, 77, 86, 91, see West 2 (1992), 265.

[4] See West 2 (1992), 120 with n. 185.

[5] Munich 2646, *ARV*^{2} 437, 1633. Elegiac incipits with οὐ δύναμαι are found at Theogn. 695, 939; Simon. eleg. 21. 3. See fig. 2.

[6] Wegner (1949), 202 f., cf. 221.

[7] Munich 2416; *ARV*^{2} 556. See fig. 3.

[8] Schefold (1997), 84.

[9] London E 171; *ARV*^{2} 579. See fig. 4.

[10] *CVA* Brit. Mus. 5. 3. 1c (p. 13), pl. 75. 3, 76. 2; Wegner (1949), pl. 13.

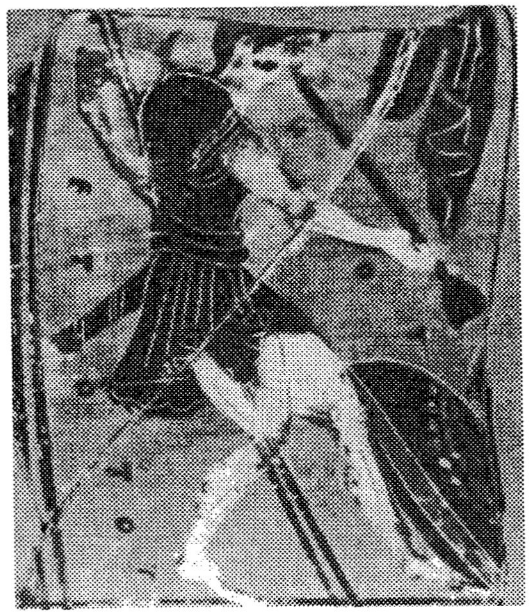


FIG. 1: Eleusis inv. 907

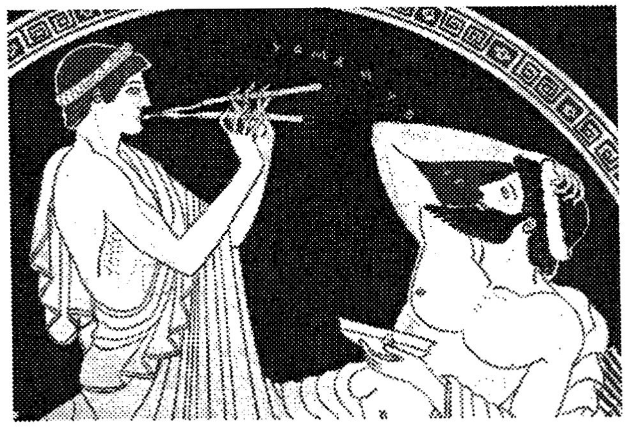


FIG. 2: Munich inv. 2646

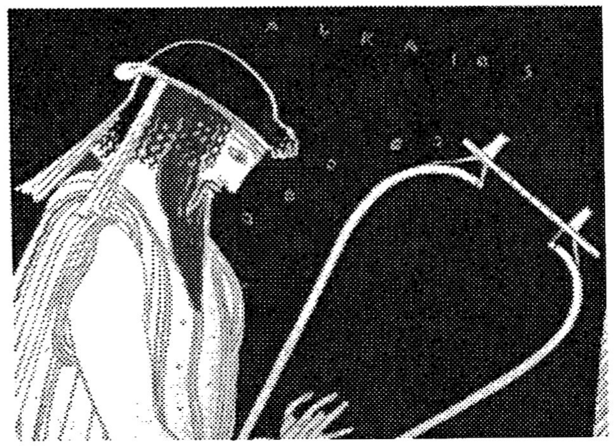


FIG. 3: Munich inv. 2416

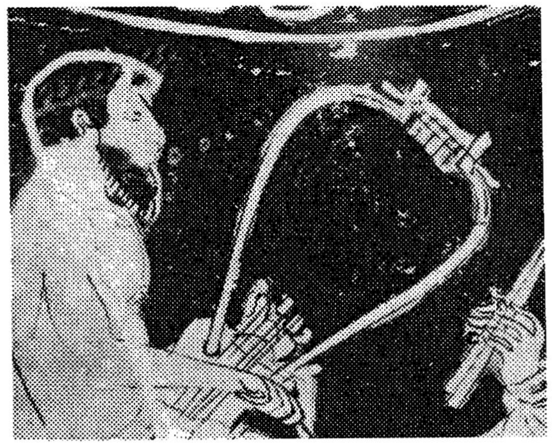


FIG. 4: London E 171

No. 2 EURIPIDES, *Orestes* 140–2 ≈ 153–5 Fifth century BC

ΧΟ. cῖγα cῖγα, λεπτὸν ἴχνος ἀρβύλας
τίθετε, μὴ κτυπεῖτ᾽.
ΗΛ. ἄποπρο βᾶτ᾽ ἐκεῖϲ᾽, ἄποπρό μοι κοίτας.

. . . . .

ΧΟ. πῶς ἔχει; λόγου μετάδος, ὦ φίλα.
τίνα τύχαν εἴπω; {τίνα δὲ cυμφοράν;}
ΗΛ. ἔτι μὲν ἐμπνέει, βραχὺ δ᾽ ἀναcτένει.

These are the opening lines of the first strophe and antistrophe of the parodos, a lyric dialogue between the chorus of young women and Electra, sung of course by a male actor and male choreuts. They are moving and singing softly so as not to wake the sleeping Orestes; at 145 Electra beseeches her friends to make their voice like the breath of a panpipe's slight reed (cύριγγος ὅπως πνοὰ λεπτοῦ δόνακος, ὦ φίλα, φώνει μοι). There is an interesting scholion on line 176 (in the second strophe):

τοῦτο τὸ μέλος ἐπὶ ταῖς λεγομέναις νήταις ἄιδεται καί ἐστιν ὀξύτατον. ἀπίθανον οὖν τὴν Ἠλέκτραν ὀξείαι φωνῆι κεχρῆcθαι, καὶ ταῦτα ἐπιπλήccουcαν τῶι χορῶι. ἀλλὰ κέχρηται μὲν τῶι ὀξεῖ ἀναγκαίως, οἰκεῖον γὰρ τῶν θρηνούντων. λεπτότατον (-τερον cod.) δὲ ὡς ἔνι μάλιcτα.

This song is sung on the so-called *nêtai* (the top notes), and is very high. It is implausible for Electra to use a high voice, especially when she is upbraiding the chorus [182 ff.]; but she has to use the high register because it is typical of people lamenting. And (the song) is as light as it can possibly be.

More detailed remarks on the melody of lines 140–2 (which must be applicable also to the corresponding words of the antistrophe, 153–5) are found in Dionysius of Halicarnassus, *De compositione verborum* 63–4 (ii. 41–2 Usener–Radermacher). He quotes the lines to illustrate the principle that music (ἡ ὀργανική τε καὶ ᾠδικὴ μοῦcα) subordinates words to melody and not vice versa. He explains:

ἐν γὰρ δὴ τούτοιc τὸ "cίγα cίγα λευκὸν"[1] ἐφ᾽ ἑνὸc φθόγγου μελωιδεῖται, καίτοι τῶν τριῶν λέξεων ἑκάcτη βαρείαc τε τάcειc ἔχει καὶ ὀξείαc. καὶ τὸ "ἀρβύληc" τῆι μέcηι cυλλαβῆι τὴν τρίτην ὁμότονον ἔχει, ἀμηχάνου ὄντοc ἓν ὄνομα δύο λαβεῖν ὀξείαc. καὶ τοῦ "τίθετε" βαρυτέρα μὲν ἡ πρώτη γίνεται, δύο δὲ μετ᾽ αὐτὴν ὀξύτονοί τε καὶ ὁμόφωνοι. τοῦ τε "κτυπεῖτ(ε)" ὁ περιcπαcμὸc ἠφάνιcται· μιᾶι γὰρ αἱ δύο cυλλαβαὶ λέγονται τάcει. καὶ τὸ "ἀποπρόβατε" οὐ λαμβάνει τὴν τῆc μέcηc cυλλαβῆc προcωιδίαν ὀξεῖαν, ἀλλ᾽ ἐπὶ τὴν τετάρτην cυλλαβὴν μεταβέβηκεν ἡ τάcιc ἡ τῆc τρίτηc.

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[1] Dionysius appears to have read cίγα cίγα rather than cῖγα cῖγα, and λευκὸν for λεπτὸν. Both variants are found in the Euripidean manuscript tradition.

For in these lines, cῖγα cῖγα λευκόν is all sung on one note, although all three words contain both graves and acutes. And ἀρβύληc has the third syllable on the same note as the second, despite the impossibility of one word having two acutes. And in τίθετε the first syllable is made lower in pitch, while the two after it are high, both equally so. Again, in κτυπεῖτ᾽ the circumflex (high falling) tone has been obliterated, as the two syllables are both enunciated at the same pitch. And ἀποπρόβατε does not receive the acute accent of its middle syllable; the accent of the third syllable has migrated to the fourth.

As Dionysius passes over ἴχνοc, he presumably found no disagreement between its accent and the melody; its first syllable was therefore on a higher note than the second. In ἀρβύλαc the first syllable must have been lower than the other two, as in τίθετε. What is said about τίθετε carries the surprising implication that in the antistrophe, 154, the interrogative τίνα was sung with the second syllable on a higher note than the first. In 142 Euripides may have intended ἄποπρο βᾶτ᾽ rather than ἀποπρόβατ᾽, in which case there was no clash between accent and melody either in the strophe or the antistrophe at this point.

The point which Dionysius is making about the independence of melody from accent might have been illustrated from any strophic song. He has taken his example from the first lyrics in the most popular of classical tragedies, one which we know was frequently performed.[1] He is referring to music which he had heard in the theatre and might expect his readers to have heard; he is not quoting from a manuscript with musical notation, and does not attempt to use notation in describing the ups and downs of the music.

He apparently assumes that it was Euripides' original music. As there had been a strong tradition of performance, it may have been so, except that the original enharmonic intervals may have come to be sung more chromatically.

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[1] See West (1987), 28.

No. 3 PAP. VIENNA G 2315 Third–second century BC

EURIPIDES, *Orestes* 338–44

⌊κατολοφυρομαι⌋ 339

] Π̿̇ P C Ṗ Φ Π [
1 ⌊κατολο⌋φ̣υρομαι ʅ̇ ματερος⌊αιμαcαc⌋ 339–338

]Ζ̣ İ Z E Δ̣[
2 ⌊οcαναβ⌋α̣κχευει ʅ̇ ομεγα[cολβοcου⌋ 338–340

] Π̿̇ P C İ Z [
3 ⌊μονιμο⌋ cεμβροτοιc ʅ̇ ανα⌊δελαιφοc⌋ 340–341

] C P Π̿̇ C P ʅ̇ Φ̇ C–[
4 ⌊ωωcτι⌋c̣α̣κ̣α̣τουθοα⌊c⌋τινα̣⌊ξαcδαι⌋ 342

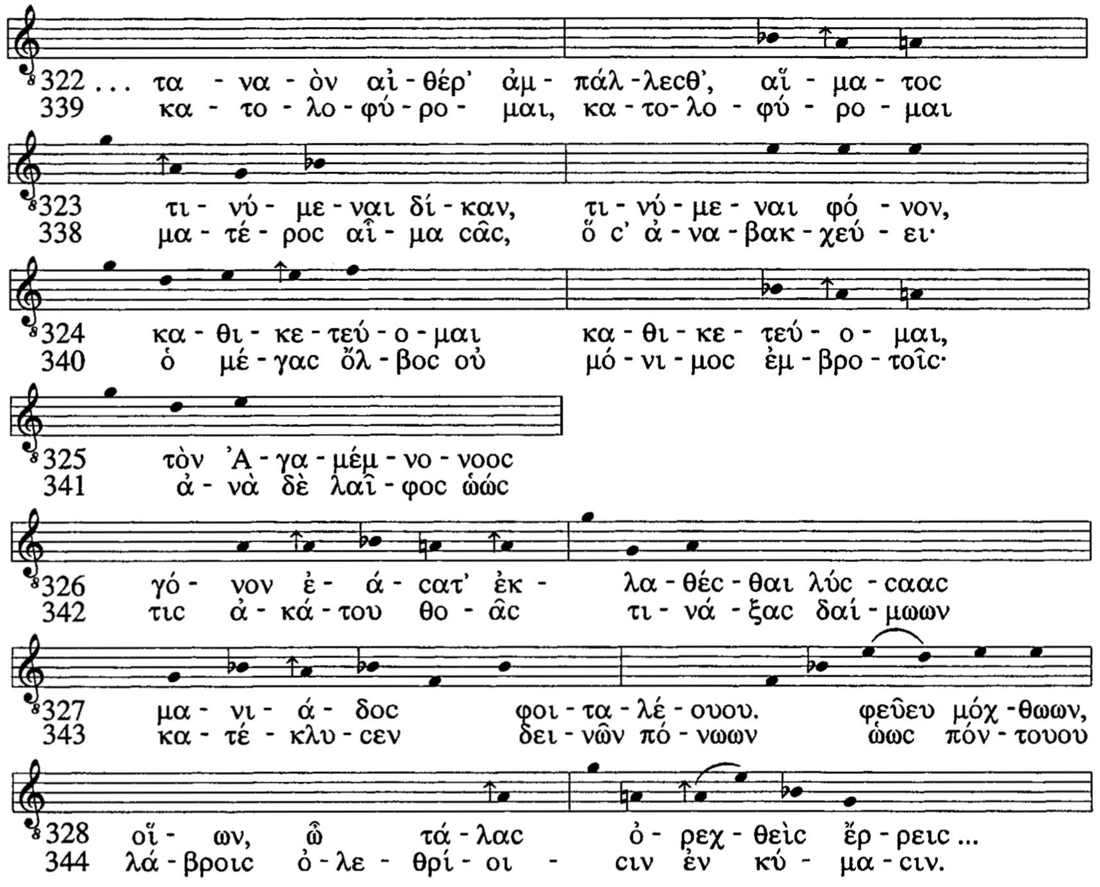
] Φ̇ Π P Π̿̇ ?[
5 ⌊μ ω ω ν⌋ κατεκλυcεν ʔ ᒣ ɔ δ̣⌊εινων⌋ 343

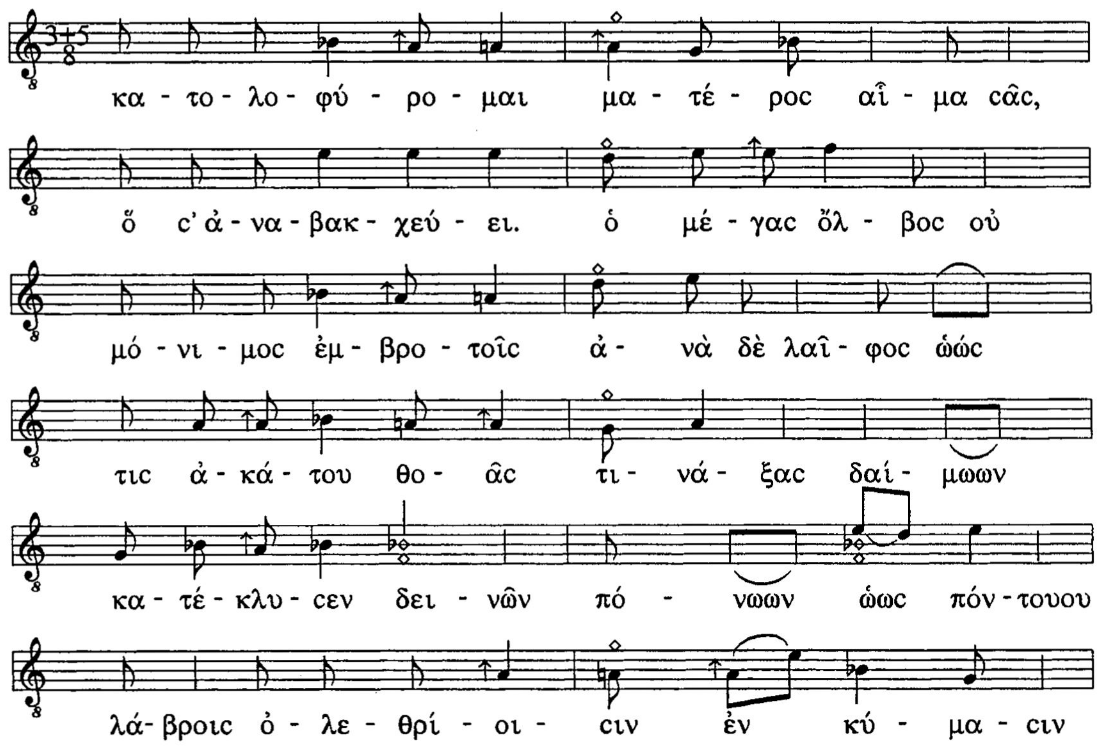
] Ż İ Z [
6 ⌊πονωω⌋ν ʔᒣɔ ωωcποντ⌊ουουλα⌋ 343

] Ρ̣ Ċ PZ Π̣̿̇ Φ [
7 ⌊βροιcολεθριοι⌋ ʅ̣̇⌊cι⌋ε̣ν̣κ̣⌊υμαcιν⌋ 344

Notation 1 Π̿̇ Crusius (1893), 175, Π Wessely 1 (1892), 67, Π̇ Turner (1987), 70 Π Wessely 1 (1892), 67, Pöhlmann (above Π a hole), Π̇ Turner (1987), 70 2 Δ̣ West 1 (1992), 1; 2 (1992), 284, Pöhlmann 3 C Pöhlmann, C Ω̣ Solomon (1976), 172 4 C– Hunger (1962), 77, C Ζ̣ Wessely 1 (1892), 67 5 Φ̇ or Ω̇ Crusius (1893), 176, see φ line 1, 4 and in the text of no. 9. 5, cf. ω in the text of line 6 ? Pöhlmann (1970), 78, Ρ̣ Crusius (1893), 177 6 Z Hunger (1962), 77, Z Φ̣ Crusius (1893), 180 7 Ρ̣ Pöhlmann (1970), 78, P Wessely 1 (1892), 67 f., Hunger (1962), 77, Turner (1987), 70 ʅ̣̇ Wessely 1 (1892), 68 P Z Hunger (1962), 77, Pöhlmann, P ʅ̣ Crusius (1893), 177 Π̣̿ Solomon (1977), 75, Pöhlmann, ∸ Turner (1987), 70 Φ Pöhlmann, Turner (1987), 70, Φ̣ Crusius (1893), 178.

Text The order of verses in the papyrus (339–338–340) is at variance with the manuscripts (338–339–340) 2 μεγα[c Pöhlmann 4 ⌊ωωcτι⌋, West ⌊c⌋ Pöhlmann 5 ⌊μωων⌋, 6 ⌊πονωω⌋ν, ποντ⌊ουου⌋ West 1 (1992), 1 7 ⌊cι⌋ Pöhlmann ε̣ν̣κ̣ West 1 (1992), 1, τ̣ι̣ν̣α̣⌊γαρ (= line 345) Solomon (1977), 79–81, c̣ι̣ν̣ Crusius (1893), 180.


322 … τα - να - ὸν αἰ - θέρ' ἀμ - πάλ -λεσθ', αἵ - μα - τος
339 κα - το - λο - φύ - ρο - μαι, κα - το - λο - φύ - ρο - μαι
323 τι - νύ - με - ναι δί - καν, τι - νύ - με - ναι φό - νον,
338 μα - τέ - ρος αἷ - μα cᾶc, ὅ c' ἀ - να - βακ - χεύ - ει·
324 κα - θι - κε - τεύ - ο - μαι κα - θι - κε - τεύ - ο - μαι,
340 ὁ μέ - γας ὄλ - βος οὐ μό - νι - μος ἐμ - βρο - τοῖc·
325 τὸν Ἀ - γα - μέμ - νο - νοος
341 ἀ - νὰ δὲ λαῖ - φος ὡς
326 γό - νον ἐ - ά - cατ' ἐκ - λα - θέc - θαι λύc - cαας
342 τιc ἀ - κά - του θο - ᾶc τι - νά - ξας δαί - μωων
327 μα - νι - ά - δος φοι - τα - λέ - ουου. φεῦευ μόχ - θωων,
343 κα - τέ - κλυ - cεν δει - νῶν πό - νωων ὡὡc πόν - τουου
328 οἵ - ων, ὦ τά - λαc ὀ - ρεχ - θεὶc ἔρ - ρειc …
344 λά - βροιc ὀ - λε - θρί - οι - cιν ἐν κύ - μα - cιν.


3+5/8
κα - το - λο - φύ - ρο - μαι μα - τέ - ρος αἷ - μα cᾶc,
ὅ c' ἀ - να - βακ - χεύ - ει. ὁ μέ - γας ὄλ - βος οὐ
μό - νι - μος ἐμ - βρο - τοῖc ἀ - νὰ δὲ λαῖ - φος ὡὡc
τιc ἀ - κά - του θο - ᾶc τι - νά - ξας δαί - μωων
κα - τέ - κλυ - cεν δει - νῶν πό - νωων ὡὡc πόν - τουου
λά - βροιc ὀ - λε - θρί - οι - cιν ἐν κύ - μα - cιν

The papyrus collection of the Österreichische Nationalbibliothek possesses a number of small musical fragments. The most famous, G 2315, containing seven lines from Euripides' *Orestes*, has been known since 1890.[1] Both it and the subsequently published fragments come from mummy cartonnage.[2] All are of Ptolemaic date. Fragments G 29825a–f (nos. 9–14) have vocal notation, while G 13763 (no. 15) and G 1494 (no. 16) have vocal notation alternating with instrumental.

Restoration was carried out on all the Vienna fragments between 1961 and 1965 in preparation for publication. E. Pöhlmann collated the originals in 1970 and has checked them again in the light of more recent critical contributions. New readings in no. 3 which J. Solomon claimed to have obtained from a photograph[3] could not be confirmed; black and white photographs tend to be deceptive in the case of texts from cartonnage, as the many brownish spots of glue are hard to distinguish from remains of ink. For the Euripides fragment a colour reproduction has been provided (see Frontispiece) so that the text may conveniently be checked.[4] In many places pieces of an upper layer remain stuck to the surface, with or without traces of ink. In no. 3 they can be identified under the microscope by the orientation of their fibres, which is some 30° from the vertical.

On the dating of this piece C. Wessely wrote:

> All diese Fragmente[5] habe ich successive aus einer Schicht von Papyrusstücken gehoben, welche dem 1. Jh. n. Chr., spätestens der hadrianischen Zeit angehören ... die prächtige Schrift des Orestesfragmentes erlaubt gewiß, es in die Zeit des Augustus zu setzen, also in jene, wo Dionysios von Halikarnaß die Partitur zu Orest 140 vor Augen hatte.[6]

It was left to E. G. Turner to correct this erroneous statement, which was evidently influenced by Dionysius' testimony. The fragment is to be dated around 200 BC.[7] This significantly increases the likelihood that the musical setting goes back to Euripides himself.[8] The redating also raises the potential credit of the papyrus as a witness to the text, though its inversion of verses 338 and 339, approved by O. Crusius and more recently by G. A. Longman, is generally and rightly rejected.[9]

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[1] Wessely (1891), 16–26; 1 (1892); 2 (1892); Crusius (1893), 174–200; Williams (1894); Torr (1894); Monro (1894), 91–4, 130–2; Jan (1895), 427–31; (1899), 4–7; Reinach (1926), 175 f.; Mountford (1929), 148 f., 168 f.; Préaux (1930); Düring (1934), 251 f.; Winnington-Ingram (1936), 31 f.; Koster (1936), 223–35; Schlesinger (1939), 363 ff.; Tiby (1942), 171 f.; Dale (1968), 2 f., 204 ff.; Martin (1953), 14–24; Wagner (1955), 213 f.; Vogel (1963), 109–13, 128; West 1 (1992), 1; 2 (1992), 277 f., 284 f.

[2] For the Euripides fragment and nos. 9–11 and 13–14 Wessely 2 (1892), 269, gives the provenance as Hermupolis Magna. No. 12 was still not known to him in 1922 (see p. 46, nos. 1–2), while nos. 15–16 were not restored until 1964–5. Whether these last three fragments were acquired from the same source as the rest cannot be established.

[3] Solomon (1976); cf. the criticism by Feaver (1978); for a reply of Solomon see Feaver (1978), n. 40.

[4] Plausible conjectures based on clear traces are West's Δ̣ in line 2 and Solomon's Π̣ in line 7.

[5] That is, nos. 3, 9–11, and 13–14.

[6] Wessely (1891), 18 f.

[7] Turner (1956), 95 f.

[8] Henderson (1957), 337 f., was still sceptical on this question.

[9] Crusius (1893), 179; Longman (1962); *contra* Biehl (1955), 24 f.; Di Benedetto (1965), 73 f.; Willink (1986), 141 f.; West (1987), 203 f. A Berlin papyrus of the sixth or seventh century (Diggle's Π⁷) containing *Or.* 290–300, 304–9, 321–30, and 333–9, has 338 before 339, as in the medieval tradition; cf. Müller (1964), 9 f.

The papyrus, whose left, right, and lower margins have perished, has seven lines of writing, containing parts of verses 339, 338, 340–4 from the antistrophe of the first stasimon of the *Orestes*. In the middle of the first four lines and of the seventh, the instrumental note Z (= *g′*) with stigme stands between two dochmiacs; it takes the old form ˥L, also seen in no. 11, and clearly distinct from the vocal Z = *e′*. The two dochmiacs of verse 343 in the fifth and sixth lines are each bisected by the sign-group ᘐ˥Ↄ i.e. a diastole[1] and the instrumental notes *f* or *f#* and *b♭* or *b*. These instrumental irruptions frame the words δεινῶν πόνων, which a scholion interprets as a parenthetical exclamation.[2] Repeated notes are not written, while vowels in melisms are written double;[3] these features recall the practice of the Delphic Paeans.

Besides vocal and instrumental symbols the papyrus also makes use of arsis-points and diseme signs. The rhythmical notation in lines 1–4 and 7 follows the pattern Ż ∪̇∪∪–̇∪–, and in lines 5–6 analogously ∪̇∪∪–̇ ᘐ˥Ↄ δεινῶν | πόνων ᘐ˥Ↄ ∪̇∪̇––; in line 6 the place of the long note with one arsis-point is taken by the melism ώωc (*e′–d′*) with two. If a resolved arsis is marked with two stigmai, the instrumental Żs may be taken as somehow belonging together with the following pointed notes. M. L. West argues that they were actually sounded simultaneously.[4]

The vocal notes represented, Φ C Ρ Π Ι Ζ Ε and perhaps Δ (*g*, *a*, *a*↑ or *b♭*, *b♭* or *b*, *d′*, *e′*, *e′*↑ or *f′*, *f′* or *f#′*), are to be found in the enharmonic or chromatic Lydian scale, except for the *g*, which would be diatonic Lydian. O. J. Gombosi assumed a scale consisting of one diatonic and two enharmonic tetrachords.[5] Similar mixed scales appear in the Delphic Paeans (nos. 20–21). Crusius had earlier[6] compared the 'Platonic' harmoniai given by Aristides Quintilianus (1. 9 p. 18. 5–19. 10 W.-I., cf. 2. 14 p. 80. 28–30), whose 'Dorian' and 'Phrygian' scales contain exactly the same series of note-symbols from Φ to Δ, continued at the upper end by ϴ (*a′*) and Ʊ (*g′*) respectively. The instrumental notes ˥ Ↄ Z do not occur together in any of Aristides' scales, but would fit a Lydian scale that was enharmonic or chromatic from *d* to *d′* and then turned diatonic.

All musical fragments preserved on stone or papyrus are written without colometry, like prose,[7] even when they are settings of stichic verses such as iambic trimeters (e.g. no. 40). No. 3 appeared to be an exception to the rule;[8] but Turner denied this with good reason.[9] West has made a non-colometric reconstruction of the lineation,[10] which is adopted here with one modification. In lines 4, 5, and 6 it postulates further melismatic doublings of long syllables, as in 6 ώωc. This permits a satisfactory alignment of the transmitted text of verse 344 with the note symbols of line 7, where nothing remains of the poetic text but the tops of three or four letters. Crusius already recognized that the instrumental Ż with arsis-point and the Ċ with arsis-point in line 7 mark the beginning of a dochmiac. He read ὀλεθρίοι]Ç ỊṆ (=344), but this left two certain traces that he could not account for.[1] Solomon read ṬỊṆẠ[γὰρ ἔτι (=345), which is ruled out by the diseme mark in the notation and does not fit the layout of lines 5–7 (=343 f).[2] West's ὀλεθρίοιcιν] ẸṆḲ[ύμαcιν best suits the traces.[3] The instrumental Ż can still at a pinch be accommodated in the line, but not the doubling of the epsilon assumed by H. Hunger and Pöhlmann for the melism P Z on ἐν.[4] We have to suppose that the nu in ὀλεθρίοιcιν was omitted in the papyrus.

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[1] So Wagner 1 (1955), 214; see also pp. 46 n. 7, 50, 53.

[2] Sch. *Or.* 340, τὸ δὲ 'δεινῶν πόνων' ἐν μέcωι ἀναπεφώνηται. Occasional comments on the music of the play in other scholia, on lines 176 (quoted above under no. 2) and 1384, together with the testimony of Dionysius of Halicarnassus (= no. 2), suggest that it survived for a considerable time beside the notationless Alexandrian editions of Euripides. Cf. Pöhlmann (1976); 1 (1994), 23–5.

[3] See p. 72.

[4] West 2 (1992), 206 f., 284 f.

[5] Gombosi (1939), 110.

[6] Crusius (1893), 181 f.

[7] Cf. Johnson 1 (2000), 66–8.

[8] Cf. Pöhlmann (1976), 70.

[9] Turner (1987), no. 35 with Addendum p. 150.

[10] West 1 (1992), 1.

The notation does not reveal whether the fragment is to be read enharmonically or chromatically. If the setting is assumed to be Euripides' own, the enharmonic interpretation is to be preferred.[5] We present an enharmonic transcription in two forms: the first with the text of the strophe as well as of the antistrophe, without indication of rhythmical values and without attempting to incorporate the instrumental notes; the second in West's version, which takes the instrumental notes as heterophonic accompaniment to the following syllables and treats the dochmiacs as bars in $^{3+5}/_{8}$ time.[6]

Despite its brevity the fragment enables us to answer the much-debated question whether strophic lyric was subject to melodic as well as metrical responsion or through-composed over strophe and antistrophe in accordance with the word accents.[7] The remains of the melody accompanying the antistrophe in the Euripides fragment, whether transcribed enharmonically or chromatically, pay no consistent regard to the word accent, and they were clearly designed to go with the strophe too. The proof of this is given by the layout. As a rule the instrumental symbols are placed not above the text, like the vocal notation, but between words. But in line 4, for no immediately obvious reason, the metron-dividing Ż is put up among the vocal symbols, while in line 7, where there might have been reason to do this because the word ὀλεθρίοιcιν overran the metron-division, the Ż was apparently written within the word. The double anomaly is at once explained when we substitute the words of the strophe for those of the antistrophe, for the supra-linear Ż of line 4 then comes at a place where a word overruns the metron-division (ἐκ|λαθέcθαι), while the Ż in the text line at 7 comes where there is word-end (τάλαc | ὀρεχθεἰc). The diastole + instrumental notes enclosing the words δεινῶν πόνων fit equally well in the strophe, where they will enclose the word φοιταλέου. Evidently the layout of the notation has been copied mechanically from the strophe to the antistrophe. We are thus entitled to postulate the same melody for the strophe, as in our first transcription.

In the strophe the melodic line moves with the word accents at three or four points (αἵματοc, ἐάcατ', φεῦ, perhaps καθικετεύομαι) and contradicts them just as often (τινύμεναι, ἐκλαθέcθαι, μανιάδοc, and ὀρεχθείc if the oxytone accent is not regarded as annulled by sandhi). In the antistrophe there are two or more agreements (θοᾶc, κατέκλυcεν; perhaps κατολοφύρομαι, τινάξαc, κύμαcιν) and four clashes (ματέροc, μέγαc, βροτοῖc, ἀκάτου). Repeated notes, as on -ναι φόνον ≈ -βακχεύει, μόχθων ≈ πόντου, do not affect the equation; for the rest, too many notes are missing to allow any conclusions. The overall picture appears completely random and does not encourage us to follow R. Giani, C. Del Grande, and D. D. Feaver[1] in their contention that the melody does pay some attention to accents. For this stasimon, at least, it must be concluded that the strophe was set to music without regard to the word accents, and that the melody was then repeated for the antistrophe.

This is in accord with the findings of Dionysius of Halicarnassus quoted under no. 2, that ἡ ὀργανική τε καὶ ᾠδικὴ μοῦcα subordinated words to melody and not vice versa. He illustrates the point from the parodos of the *Orestes*, but says that it was clear from much other evidence besides. Nearly all the musical fragments so far known which antedate the Delphic Paeans point the same way: so far as they are legible, they show no greater correspondence of accent and melody than might be expected by chance.[2] Only a few of the fragments collected under nos. 5 and 6 look as if they may be exceptions.[3]

Dionysius apparently treats fifth-century music as a norm for his own time.[4] But from the Delphic Paeans (nos. 20–1) to the Christian hymn from Oxyrhynchus (no. 59) the practice of respecting the word accents in musical settings—only possible in non-strophic genres—was the prevalent one, recognized by grammarians and rhetoricians from the second century BC to the fifth AD.[5]

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[1] Crusius (1893), 178, 180; Hunger (1962), 76–8.

[2] Solomon (1977), 79–81.

[3] West 1 (1992), 1; 2 (1992), 284.

[4] Hunger (1962), 77. The Delphic Paeans show that even a short vowel in a closed syllable was written double in the case of a melism, e.g. no. 20. 6 Δεελφίcιιν, 14 λωτοὸc; no. 21. 12 ἀαμπέχει.

[5] Jan transcribed the piece in both ways: (1895), 431, and (1899), 7. For the prevalence of enharmonic in fifth-century tragedy see West 2 (1992), 164 f., 351, 354.

[6] West 2 (1992) 284 f.

[7] Cf. Monro (1894), 116; Mountford (1929), 164–6; Giani (1931); Dale (1968), 204–7; Sedgwick (1950); Koster (1950), 27–9; Irigoin (1952), 6 f.; Koller (1956); Winnington-Ingram (1958), 41–3; Feaver (1960); Pöhlmann (1960), 17–29; Del Grande (1965), 70 f.; Koller (1963), 9–12; Winnington-Ingram (1965), 193; Wille (1965), 641; West 2 (1992), 197–200; Sicking (1993), 33 f.; Devine–Stephens (1994), 157–223; Pöhlmann (1995), 1637 f.

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[1] References in the preceding note.

[2] In the Berlin Ajax fragment (no. 17), which probably comes from a tragedy, the melody contradicts the accents almost consistently.

[3] See below, pp. 25, 39.

[4] Cf. Pöhlmann 1 (1966), 210–13. Koller (1956), 27, basing himself on the account in Ath. 10. 453c–4a of Callias' 'alphabet' tragedy (*PCG* iv. 39; supposedly a model for Sophocles and Euripides), takes Dionysius' discussion as evidence for late Euripidean and post-Euripidean music. But his interpretation of Athenaeus' report is contradicted by chronology. Cf. Pöhlmann (1971).

[5] Athenodorus, *GrGr* i 3. 474. 19–23; Varro, *GrRF* 282, 84–104; Cic. *Orator* 57; Mart. Cap. 3. 268.

No. 4 PAP. LEIDEN INV. P. 510 Third century BC

EURIPIDES, *Iphigeneia in Aulis* 1500(?)–09; 784–94(?)

1]. .[

2] [

3 ⌊α⌋ν̣α̣ι̣ν̣⌊ομαι

4] [ ] [

5 ⌊μη⌋λιπη̣⌊ι̣ιωιω⌋λαμπ⌊αδουχοcαμεραδιοcτεφεγγοcετερονετερον⌋ 1504–7

] [ ] [
6 ⌊αι⌋ω̣νακαιμοιρανοικη̣⌊cομενχαιρεμοιφιλονφαοc⌋ 1508–9

f

] !̣ . ? . ı ? ? ? ?[
7 ⌊μη⌋τε̣μ̣ο̣ι̣μητε̣μ̣οιc̣⌊ιτεκνωντεκνοιcελπιcαδεποτεελθοι⌋ 784–5

] C . T C T . ? ?[
8 ο̣⌊ι⌋α̣να̣ι̣πολυχρ̣υ̣c̣ο̣ι ||λυ̣δαι̣⌊καιφρυγωναλοχοιcτηcουcιπαραιcτοιcμυθευcαι⌋ 786–9

? ? ∸ . +⊥ [
9 ταδεεcαλληλαcτιcα⌊ραμεευπλοκαμουκομαcερυμαδακρυοεντα⌋ 789–91

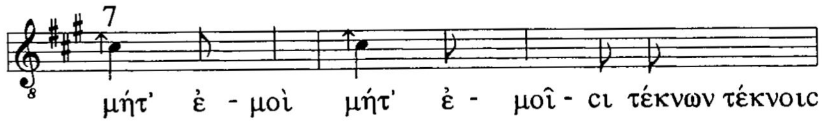
Π̣ Ṭ C̣ ⊥ C T Π T [
10 γ̣⌊υcα⌋cπ̣αcπατριαcολο̣⌊μεναcαπολωτιει⌋ 791–2

]? !̣ Ọ [
11 793–4

Notation 7 !̣ : there may be ink on a fibre at top left of the upright. C is not suggested, as there is no trace of a top bar; Z or ⊥ may be possible Next: a spot of ink at mid height Above μοι a stigme Above τεμοιc[Θ̣Χ̣⊥̣Ʊ̣ Jourdan-Hemmerdinger (1973), 294, 298; (1981), 49, 60 f., OA–Ʊ Mathiesen (1981), 24. The first sign may be illusory; then (over τ̣ε̣) a rising diagonal and a point, possibly representing X or A; over μ̣οι a semicircle facing right, the lower end extended in an upward curl, possibly representing Ʊ; over c̣[ι part of an upright 8 Stigme after the first C and probably the second T. At the second CT both notes are above the syllable χρυ, but perhaps the T is displaced to the left to make room for the following markings (whatever they are); if χρυ was intended to be divided between two notes, the spelling χρυυ would be expected (but see below on the text of 10). Above coι, a short low horizontal (perhaps to be combined with the stigme); then the tops of two vertical strokes which do not reach as high as the tops of CT but extend down into the line of text, separating πολυχρυcοι from Λυδαι; then a curved stroke like a right-facing bracket, and another vertical in the text line, not as tall as the first two, crossing the left leg of the λ Above δαι̣[possibly the left tip of T 9 Above τα a rising diagonal; above δε a descending diagonal and before it, level with its foot, a point Above α(λλ) a thick horizontal bar and stigme; above η another stigme Above (λα)c something like a +; Mathiesen (1981), 24 sees a pentaseme sign. The position does not suit a note, unless an instrumental note falling at the metron-boundary, as in no. 3. In that case ⑊, corresponding to the vocal ⊥, may be intended; but there are several other possibilities (⊣ ⊥ ⊢ etc.) 10 Above γ̣[υc: Π̣Ṭ West, Γ̣⊤̣ Jourdan-Hemmerdinger (1973), 294, Γ̄ Γ Mathiesen (1981), 30. The third sign, which is damaged at the right and broken away below, may be either C̣ or Π̣ Jourdan-Hemmerdinger (1973), 294 sees two further traces over πατ; West does not 11 !̣, the top of a vertical Then a small circle open to the right, read by Jourdan-Hemmerdinger (1973), 294 and Mathiesen (1981), 24, 30, as C̣, but while it resembles the c used in the text, it is quite unlike the square sigma of the musical notation. Mathiesen estimated that these two notes stood above (ἔ)τυμοc (794), but this is quite uncertain.

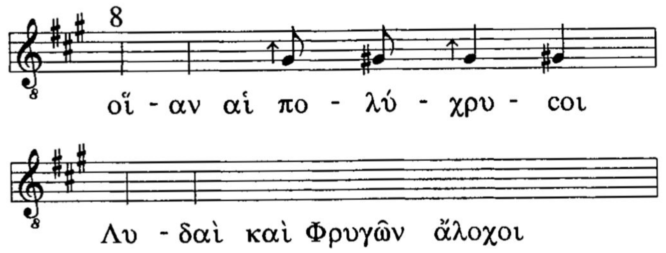
Text Between 6 and 7 paragraphos and coronis supplied conjecturally 8 This line of text as supplemented on the basis of the medieval text seems excessively long; perhaps the papyrus had a shorter text here 10 τα] | γ̣[υcα]c̣ van Akkeren (1983): τ̣[αα]c̣ Jourdan-Hemmerdinger (1973), 294, wrongly. As there are two notes over -cα]c̣, we might have expected the spelling τανυcααc, but the space does not favour it Then *prima facie* παc, but unless this was an accidental anticipation of πατριαc, γαc may have been intended. The medieval *codex unicus* L has only πατρίδοc.

ΧΟ. κλέοc γὰρ οὔ cε μὴ λίπῃ 1504
ΙΦ. ἰὼ ἰώ / λαμπαδοῦχοc ἁμέρα / Διόc τε φέγγοc, ἕτερον ἕτερον 1505–7
αἰῶνα καὶ μοῖραν οἰκήcομεν / χαῖρέ μοι, φίλον φάοc 1508–9



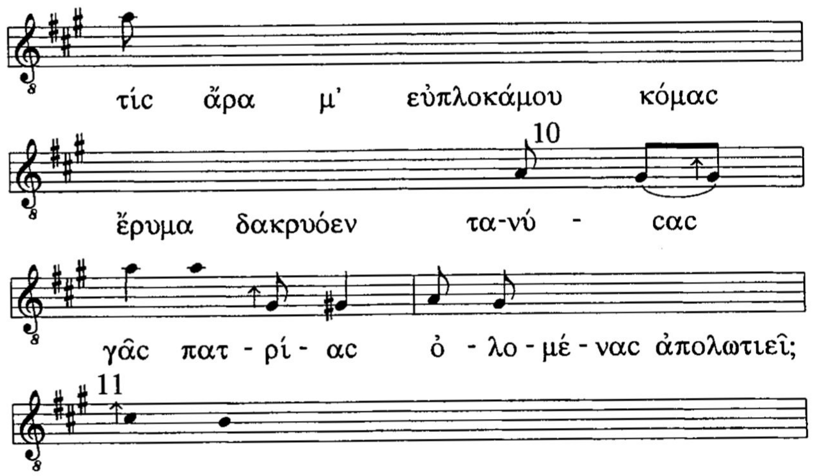
784

ἐλπὶc ἅδε τότ' ἔλθοι 785



786
787

cτήcουcι παρὰ ἱcτοῖc μυθεῦcαι 9 τάδ' ἐc ἀλλήλαc 788–9


τίc ἄρα μ' εὐπλοκάμου κόμαc
10
ἔρυμα δακρυόεν τα-νύ - cαc
γᾶc πατ - ρί - αc ὀ - λο - μέ - ναc ἀπολωτιεῖ;
11

790
791
792
793–4

The papyrus was acquired by the University of Leiden in 1971. D. Jourdan-Hemmerdinger identified the text as Euripides and made the first provisional publication.[1] M. L. West examined the papyrus for the present edition. For a colour reproduction of the papyrus see the Frontispiece.

The fragment, dating from perhaps somewhat before 250 BC, contains excerpts from two lyric portions of the *Iphigeneia in Aulis*, not in the order in which they stand in the play. The first four lines come from Iphigeneia's sung dialogue with the chorus as she departs to be sacrificed; the excerpt ends at 1509, and is followed by another taken from the second choral stasimon, 784 ff. No musical notes are visible in what remains of the first excerpt, but the lines of text are spaced as in the second excerpt, and presumably were also furnished with notation, or intended to be. There is no colometry; we should not expect to find any at such an early date, and it is in any case not characteristic of texts carrying musical notation. Instead the text is written in long lines of irregular length, usually ending with a complete word, though τανύϲαϲ in 791 appears to have been broken between lines 9 and 10.[2] The second excerpt started on a new line, and although the margin is lost, we may guess that it was marked by a paragraphos and coronis; cf. no. 6, frs. 4 ii 7–8 and 15 ii 5.

The order of the excerpts indicates that the compilation had nothing to do with a performance of the play, but rather with some sort of concert performance of musical highlights.[3] Both passages are emotional utterances of women, though of a chorus in one case, in the other mainly of the heroine of the tragedy. Who was to perform these excerpts? No doubt a solo singer—a man, not a woman, as is shown by the vocal register, which extends from *f* to *f#′* and calls for a tenor.[4]

The notation is for the most part badly preserved and difficult to decipher. The first editor set scholars on the wrong track by mistaking the vocal sign C, which here takes a square form,[5] for the instrumental sign ⊏, and concluding that the notation was a mixture of vocal and instrumental signs, from several different tonoi. The most clearly recognizable signs, however, are all from the vocal notation (as one would expect), and moreover from the Hyperaeolian scale: T C Π I ⊥, where T C Π make an enharmonic (or chromatic) *pyknon*, and ⊥ is the note an octave above Π. Less certainly recognized notes from the same system are X or A, and diatonic O. In at least one place, as clear as any other sign, we find a horizontal bar; this also occurs occasionally in papyri of the Roman period (nos. 44 and 48), apparently with the function of a note, but its significance is unknown.[6]

At two places of juncture between metrical cola, following πολύχρυϲοι and ἀλλήλαϲ, we find obscure symbols which cannot be interpreted as vocal notes, in the first case an assemblage of downward strokes that may include a diastole, in the second case a cruciform sign +. The analogy of the *Orestes* papyrus (no. 3) suggests that instrumental notes might be in place at these points, even if we cannot identify them with any assurance. See the notation apparatus above.

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[1] Jourdan-Hemmerdinger (1973); a second attempt in Jourdan-Hemmerdinger (1981). Other discussions: Comotti (1977); (1989), 110 f.; Ōki (1979), 55–8; van Akkeren (1983), 259 ff.; Mathiesen (1981), 23–32; Černý (1986); West 2 (1992), 286 f. A larger photograph (with no discussion) in Boswinkel–Pestman (1978), pl. I.

[2] On column-widths in musical texts see Johnson 1 (2000), 66–8.

[3] Jourdan-Hemmerdinger (1981), 37, absurdly supposes that the sequence in the papyrus is original, and that 'la tradition médiévale doit souffrir d'un déplacement accidentel'.

[4] We may surmise that at 1504 κλέοϲ γὰρ οὔ ϲε μὴ λίπηι he eliminated the dialogue element by substituting με for ϲε.

[5] Cf. Ōki (1979), 55, 57. ⊏ is historically intermediate between Σ and C, and attested also on inscriptions and coins: Gardthausen (1913), 98 f.

[6] Cf. pp. 150, 162.

Stigmai appear in five or six places, probably with their usual meaning, that is, marking the ἄρϲιϲ or up-beat. For a cretic such as μήτ᾽ ἐμοί (784), whether understood as paeonic (5/8) or a syncopated iambic (6/8), an arsis-point over the third syllable is in accord with ancient teaching, but one over the first syllable is not.[1] For the pherecratean in 786 we might expect

οἵαν αἱ̇ π̇ολύχρυϲο̇ι,[2]

and the second and third of the predicted stigmai seem to be in place. The metre of 789 is uncertain; with the transmitted μυθεῦϲαι it will be a dragged glyconic, whereas with August Matthiae's μυθεύουϲαι it will become an anapaestic dimeter. In either case the stigme over the second syllable of ἀλλήλαϲ is satisfactory, while that over the first (if it is real, and not merely the end of the bar) is problematic.

A few melodic features are worthy of remark. As in the *Orestes* fragment (no. 3), there is repeated play with the enharmonic *pyknon*; the three-note figure Π T C on (τα)νύϲαϲ (10) resembles that on (ἀκά)του θοᾶϲ in *Or.* 341, descending semitone + rising quarter-tone. But there is then a surprising leap up to ⊥, an octave above the Π. This high note is also used for the interrogative τίϲ (9) at the beginning of the sentence; cf. no. 42, lines 2 (twice) and 8; no. 53 (a), line 3. Otherwise no significant correlation can be observed between melody and accent, such as one might have expected in this astrophic lyric.

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[1] Cf. West 2 (1992), 137, 140.

[2] Cf. West 2 (1992), 148.

No. 5 PAP. ASHM. INV. 89B/31, 33 Third–second century BC

SOPHOCLES JUNIOR, *Achilleus* ?

Fr. 1

]Y N Y N̄ N Ṇ[
1]γ̣ε ιωιμοι εε αξιοντον̣ε̣ρατ̣[

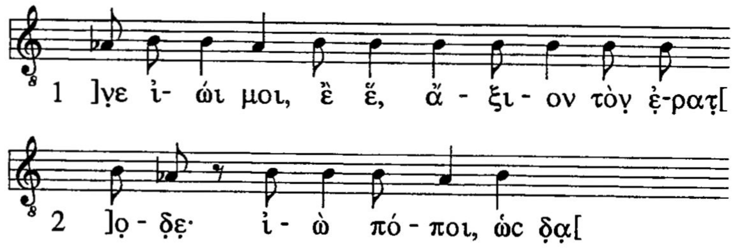
]Ṇ Y N Y Ṇ [
2]ο̣δ̣ε̣ ιωποποιωcδ̣α̣[

] Y N [
3]μ̣αντη̣ ̣[

] Ṇ Π̣[
4]π̣οc̣ ̣[

] Ṇ [
5]η̣παιc [

]N N [
6]δ̣ε̣τ̣[


1]γ̣ε ἰ- ώι μοι, ἒ ἕ, ἄ - ξι - ον τὸν̣ ἐ̣-ρατ̣[
2]ο̣ - δ̣ε̣· ἰ- ὼ πό - ποι, ὥc δ̣α̣[

Fr. 2

1]π̣ηιν̣[

] M [
2]c̣οφε̣ω̣ν̣[

] ̣ [

Fr. 1 *Text* 1 Perhaps δύcτη]νε ἄξιον τὸ γέραc not excluded 2 Perhaps τ]όδε 3 e.g. ὀλοί]μαν, ἐ]μάν τ᾽.

Fr. 2 *Text* 2 ὄφεων?

Fr. 3

1]κ̣ ̣ ̣ ̣γ̣ ̣[

]Ṇ ? ? [
2]τ̣νει̣cα̣θ̣[

]? [
3]λ̣υ̣α̣[] ̣[

]? Π̣[
4]τ̣α̣μ̣[

] Ṃ [
5]ν̣ε̣οντυρο̣ν̣[

] N̄ N [
6]ε̣ιc̣ηπροcθ̣α̣[

] M M̄ [
7]μ̣αιωκαλε̣αι̣[

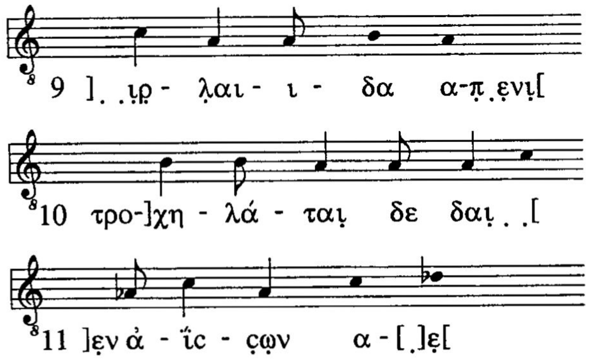
] N [
8]υφρονειcοcο̣[

] M T N T[
9] ̣ ̣ι̣ρ̣λ̣αιιδααπ̣ ̣ε̣νι̣[

]N̄ T Ṃ̄ [
10]χηλαται̣δεδαι̣ ̣ ̣[

] YMY Ṃ Λ [
11]ε̣ναιcc̣ω̣να[̣]ε̣[

] N Λ̣ N̄ [
12]κ̣υκε̣ι̣ηρατον̣[


9] ̣ ̣ι̣ρ̣ - λ̣αι - ι - δα α-π̣ ̣ε̣νι̣[
10 τρο-]χη - λά - ται̣ δε δαι̣ ̣ ̣[
11]ε̣ν ἀ - ΐc - c̣ω̣ν α - [̣]ε̣[

Fr. 3 *Text* 5 Possibly ἔκ]νεον 7 ὠκαλέαι? 9 ᾿Αχαιΐδα cannot be read.

Fr. 4

1]δ̣υ̣[ ] . . . [

]N̄ N̄ ?[
2]δ̣εφυϲ̣ια[

] N̄N̄ [
3].ε̣ιδενα.[

] Ṭ̄ ?[
4]χρυϲε̣ακ̣[

] ? ? [
5]τ[

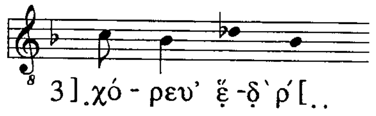
Fr. 5

]? [
1]α̣ι̣πατη̣ρ̣μ̣ε̣ι̣[

]?[ ]Π̣ Π̣[] ? [
2]φυ ταλανμ̣οι̣ βαλ̣[

]? M Π Λ Π[
3].χορευε̣δ̣ `ρ΄[. .

] ? ? [



Fr. 6

]Κ̣Π̣? ?[
1]ε̣τ̣ε̣α̣δ̣ε̣. .[

Fr. 7

1]τ̣ι̣μεχ̣ειφρυαγμο.

] Γ̣
2]. .[.].ει

]

Fr. 8

1 κ[

2 π̣ε̣ .[

3 . .[

4 τ̣[

Fr. 4 *Notation* 3 The bar over each N is uncertain.

Text 2 δ' ἔφυ, -δε φύϲ, (ἐ)φυϲία?

Fr. 5 *Text* 1 πατὴρ 2 ἔ]φυ? βαλ̣[λήν? (βαϲιλεῦ does not suit the traces) 3 χόρευε, then δ[όμωι corrected to δρ[όμωι? But the melodic pattern might favour e.g. χόρευ' ἕδρ[ανα.

Fr. 7 *Text* 1 e.g. ἄρ]τι μ' ἔχει φρυαγμόϲ̣.

Fr. 8 1 and 3 may be notation.

These fragments come from a collection of cartonnage scraps in the Ashmolean Museum, dating from the third to second century BC. Their provenance is not recorded but is assumed to be somewhere in the Fayûm. They are written on the → side of a roll which on the ↓ side had iambic and anapaestic portions of a tragedy, identified by a subscription as 'Αχιλλεὺ[ϲ] Ϲοφοκλ[έουϲ; there are also four fragments of this tragedy with nothing on the → side. All have been recently published by M. L. West.[1]

The music fragments have the appearance of tragic lyric, and there is a real possibility that they belong to the same play that was copied on the ↓ side of the roll. In Pap. Köln 241, which is also an Achilles tragedy from Ptolemaic cartonnage (but in a different hand), there stands at line 28, between two iambic episodes, the note ἄλλα ὀπίϲω χοροῦ μ[έλοϲ, 'more on the back: choral song', suggesting that the text at least (if not the music) of the omitted ode had been supplied on the verso.[2] The same practice may have been followed by the copyist of the play in the Ashmolean papyrus.

The music lies in a baritone register, spanning no more than a sixth, from Y (in real terms approximately *f*) to Γ (approximately *d'*), and in fact it is for the most part contained within the fourth from Y to Λ.

The notes preserved, in order of frequency, are: N (24 times), M (9), Y (7), Π (7), T (4), Λ (3), K (2), and Γ (1). This is at first sight perplexing, as none of the regular scales which contain N (enharmonic/chromatic Hyperdorian, Hyperionian, Hypoaeolian, or Hypolydian) also contains M or Y. In fact N is the odd one out; Y T M Λ K Γ represent a segment from conjunct tetrachords in the enharmonic or chromatic Hypodorian or Hyperphrygian scale, while Π is the diatonic alternative to T in such a scale. It is impossible to be sure whether the notation should be interpreted enharmonically or chromatically, as the early fourth century, the presumed date of the lyrics, was a time of transition when both were used by tragic poets, and modulation into diatonic might occur with either. At the time when the manuscript was written, however, it is likely to have been read as chromatic.

If the most frequent note in these fragments, N, is extraneous to the scale chosen for notation, this is symptomatic of the inadequacy of handbook theory to accommodate the modal variety of actual music in the late Classical period. The N represents a note a semitone or so below the 'standing note' M. In fr. 1 it alternates insistently with Y, giving the interval of a minor third (on the chromatic reading), but it seems to appear also next to Π (semitone); in fr. 3 it alternates with Λ (minor third), and with T (tone).[3]

Fr. 1 is of particular interest as showing how such typically tragic exclamations as ἰώ(ι) μοι, ἒ ἕ, and ἰὼ πόποι might be sung. Here at least there is reasonable agreement between melody and word-accent. So too at fr. 3. 10–11. For the rest there are too few identifiable words, or too little melodic movement, to tell us anything.

A feature of musical notation that appears here and in some other Ptolemaic fragments (nos. 6 and 8) is that certain notes sometimes have a bar above them (M̄, N̄). The significance of this is unknown; the question is discussed below in the commentary on no. 8.

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[1] West (1999), 43–53. See there for discussion of the play. As the title 'Αχιλλεύϲ is not attested for the famous Sophocles, it is suggested that the drama may be the work of his grandson, the younger Sophocles.

[2] See Gronewald (1987), 20.

[3] If we were to adopt an enharmonic reading, and take N to be a quarter-tone below M, the intervals would be: N Y, major third; N T, 1 ¾ tones; N Π, ¾ tone; N Λ, semitone. This is clearly a less plausible set.

No. 6 PAP. ASHM. INV. 89B/29–32 Third–second century BC

Fr. 1

Col. i

1]αρὀγκεαρ

2]. . . .[ ].νμηπωϲ

]
3]. . .[ ]θ̣ε̣. .ν

]Λ̣ Μ Μ̣̄? ?
4]ν̣ιδα̣ϲ̣μινατι̣ζει

]? Λ Μ̣
5].ε̣ιαι̣.[.]. .

] Π̣[
6].[.].

three lines stripped, then

11].ε̣ϲαιτε

Col. ii

Ɏ Λ ?[ ] Υ [
1 βαρυ̣. .[.]ο̣ρ̣εντ̣ε̣[

Υ [ ] Π̣Τ̣(?) Λ̣[
2 θ̣ρυπτο̣[ ]. α̣μ̣ε̣λακ̣[

[ ]Μ Λ Υ̣[
3 α̣. .ρ̣αι[ ]τ̣αν̣α̣ι̣χ̣[

Π Λ [ ] Υ̣ ?[
4 . .χ̣.η .[ ]. ιμ̣ε̣λ̣ο̣δ̣[

Τ̣ [ ]?[ ] [
5 κ̣. .τ̣ο̣μ̣ε[ ]λ̣λ̣ον̣[

]ΛΠ[ ] [
6]ε̣π̣ .[ ]δ̣α̣νετο̣[

]?[

] Π̣[
]. .ψ[

Notation i 1–2 seem to lack notation 4 The note after Μ̄ may be Π, Τ, Υ.

Text i 1 i.e.]αρὸν κέαρ 2 μή πωϲ 4 μιν ἀτίζει.
ii 1 ἔθ]ορεν, ἔπ]ορεν? 2 θρυπτο[μέ]ν̣α μ' ἐλάκ[τιϲε or the like? 3 The placing of the notes suggests word-division after]ταν.

Fr. 2

1].κ̣ρ̣. . .κ̣εξυ̣π̣αι̣[

] [
2].α̣θ̣ιζω̣ν̣α̣μφοτερ̣[

] [
3]. .ρ̣οιολ̣α̣ω[

] Λ̣[
4].ραϲε̣ λ̣υ̣ε[

]Λ Π Υ̣[
5]. . . ο̣[

Fr. 3

1]υκολιγο̣δ̣ρ̣[.].[

]Μ̣ Υ [
2].ε̣πεα [

] Π̣[
3].δετ̣ο̣ι̣δ̣αιμ̣[

Fr. 2 *Text* 2 Probably]κ̣αθίζων ἀμφοτερ[After 5 three lines stripped, then traces of five more, with no legible notation.

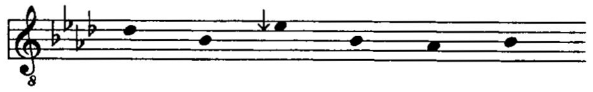
Fr. 3 *Text* The fibres of this fragment suggest that it may have stood to the right of fr. 2. 3–5 1 ο]ὐκ ὀλιγοδρ[α]ν̣[– 3 τ̣ο̣ι̣: or perhaps π̣ι̣ δαίμ[ων?

Fr. 4

Col. i Col. ii

]? ? Λ [ ] Π Θ Π Υ Π̣
1 . . .].α̣ι̣.α̣[]θ̣ειαλεω̣ιε̣ρ̣ημ̣.ταται π[
2 . .]τ̣εναλ.[]οιν̣απ̣οτι̣πλαζεταιορμ̣οιϲ .[
3 . . .(.)]τ̣ανηρ̣[]ψα̣λ̣λ̣ο̣ϲηρε̣νατροφο̣ν
4 . .(.)]ζ̣ο̣ναι̣δ̣α̣νθ̣ρωπωνελ̣ικ̣ιτ̣ενε̣α̣ι
5]ν̣αχλωροναμφ.ι̣ν̣ο̣ι [
6 . . .]α̣υ̣χεν̣α̣β̣α̣λ̣[.].[.]κιϲϲου̣καιελιϲϲομε [
7 __ν̣α̣νϲταφυλαν ερικυ̣μ̣οϲιφο̣ρβαδων A! [
8 αιγωντοκοιϲιτ̣ε̣ρ̣πομενονκαιακρατωι *f*
9]. .[ ]. . . . .[ ]. . . . .ι̣ϲ̣

Verse with notation over the first line only. This cannot (as in the case of no. 19) represent a pattern to be followed throughout, because here the verses are of variable length, and their boundaries are not indicated in the manuscript. Possibly the singer used these notes as a starting-point and then improvised his melody. In modern transcription the note-sequence appears as



Text 1 Apparently ἐρημọ́ταται (the melody favours this rather than dative -τάται, though the higher note on -ρη- is anomalous) 2 Perhaps οἴνα; then ποτιπλάζεται ὅρμοις 4 ἀνθρώπων ἕλικί τε νέᾱι 5 χλωρόν 6–8 αὐχένα ... κισσοῦ καὶ ἑλισσομενᾶν σταφυλᾶν, then after a space of three letters ἐρικύμοσι φορβάδων αἰγῶν τόκοισι τερπόμενον καὶ ἀκράτωι. A paragraphos after 7 To the right of 7–8: AI[over a paragraphos and coronis, presumably marking a new beginning in the following column. The AI[, if not a title such as (Timotheus') Αἴας ἐμμανής, might represent αἰολιστί (abbreviated?); cf. no. 9. 6 φρυγιστί. But below this, blank papyrus where text would be expected.

Fr. 5

]? Y [
1]λ̣ε̣ινωcγα̣[

]? Λ Π[
2].ι̣τερπνο̣υ̣π̣[

]?[

Fr. 6

1]μ̣ελι̣cει [ ]. . . .[

]? ? ?[ ]M Y[
2].[ ]ε̣ε̣. .[

about four lines stripped, then

].[

]ỴM YΛ ?Ṃ̄ M ?[
7 υ̣μοιcεγκαθεδ̣ραι̣c̣ιν̣ε̣λ̣αγχ̣αc̣ο̣ιω̣.[. . .]. . κ̣[

]Π̣ Ṭ M ΛṂ Λ̣ Ỵ [
8]μενονμελο̣[

] Y N Y Λ̣[
9]. .[ ] . .υ̣τ̣α̣[

Fr. 5 *Text* 1 κ]λεινῶc γὰ[ρ, βα]λεῖν ὡc, etc. 2 τερπνοῦ.

Fr. 6 *Text* 1 λι̣: or λυ̣ 7 Apparently ἐν καθέδραιcιν (or -αιc ἴν᾽) Not ἐλαγχαν-. The χ could be κ, sc. ἕλ᾽ ἀγκάc 8]μένον μέλο[c? (The melodic line favours a perfect rather than a present participle).

Fr. 8

]Π̣ M̄ [
1] . α̣ . ιδικατ̣[

]? M I [
2]. . ο̣ι̣c̣α̣δ̣ιω̣κ̣[

] Π Ṃ ?[
3]. ντε̣. .π̣ε̣.[

] Π̣ Ṭ Ỵ[
4]. .λ̣ε̣c̣ . . .[

]? ? ? Ṃ[
5]. . . . . . .[

] Λ̣Ṃ ?[
]. . . . . .[

] ?[

Fr. 7

Parts of seven lines of text, largely illegible.
3]ν̣.α̣ρ̣π̣ιπ̣τε̣νε̣[, 6] . α̣ι̣τ̣εχν̣η̣c̣ηλ[, with the note M̄ above the χ 7 completely illegible, but a note M can be made out.

Fr. 9

A scrap without notes.

Fr. 10

Narrow strip, about ten lines, only a few letters legible. The notes Π Ṭ are visible above the penultimate line and Ṃ̄ over the last.

Fr. 11

Col. i

1].

]Ṃ
2]ν̣ον

]Π
3]. ταν

]

Col. ii

1 . . .[

. .[
2 ε̣ν̣. . .[

Fr. 12

1]ε̣α̣γε .[

]Π̣ [
2]π̣ο̣ντα[

Fr. 14

]? Π̣ Y [ ]Π̣[
1]φιλημαṭω̣ν̣α̣π̣ε̣.[

] Π Y [] Π [
2]ζη̣ .λ̣α̣cαλλ̣ε̣μ̣ανεκατ̣[

] Λ Ṃ̄ Π̣ Y Π [
3].[

Fr. 14
The content suggests a possible location near fr. 15 i: the piece sits well immediately above 15 i 1, but a join cannot be confirmed.

Text 1 φιλημάτων ἀπε- or ἀπ᾽ ἐ- 2 Ζῆν᾽ ἄαc᾽ not ruled out Then apparently ἀλλ᾽ ἐμὰν (or ἐμᾶν, with ἕκατι?).

Fr. 13

Col. i

]ΜΛΠΛ Π
4]π̣ιεπ̣ομην

5]?

Col. ii

1].̣ .̣[

]Λ̣ Π̣Λ̣ Μ̣ ? Λ̣ Π Υ Π Υ [
2] .̣ε̣ι̣ε̣νυμνονκ̣α̣τ̣αθ̣ειον α̣θ̣λιο̣[

] Υ Π Υ [
3]ε̣υ̣τ̣ε̣. . . . .[

] Τ̣ Μ Τ̣ Μ̣ ΤΜ [
4 ται̣λ̣[.̣]λ̣αιτιcαδεταιε̣ρ̣π̣ε̣. .̣ειν̣ε̣ι[ ] .̣α̣χεν̣ [

Λ̣ Θ Μ Λ̣ [
5 . . . . .μ̣. . .μ̣μ̣οι̣c̣ε̣πιḳα̣. . . . . [

Text i 4 ἐ]πιεπόμην.

ii These verses perhaps stood not far from the poem-end marked in fr. 15 ii 4, and belonged to a citharodic *sphragis*. 2 E.g. θεοὶ χα]ρεῖεν. The dotted letters in κ̣α̣τ̣αθ̣ειον are very uncertain. A space before α̣θ̣λιο̣[(the ο̣ might be ε̣[) 3 Or c̣υ̣γε̣ 4 Perhaps ἅ̣[λ]λ̣αι τίc ἅ(ι)δεται?

Fr. 15

Col. i

1].̣ .̣ εοκυπριδοc̣ε̣κ̣δα

] Υ Λ Π ΥΛΠ Υ
2].̣ ω̣ν̣ .̣ε̣δ̣ρ̣ομονεπικροτον

]Μ̣̄ Τ Μ Π Υ [
3]ε̣λ̣ειε̣ικανειμε̣ρ̣ωτι

] Γ Π̣ [
4]α̣

]Υ̣ Π
5].̣νοcε̣ιc̣

]?Λ̣Π̣Θ̣
6].̣ω̣. .̣ε̣. .

Col. ii

1 υ̣π̣. .̣[

Λ̣ ?Λ̣ Υ Π [
2 τ̣ο̣λ̣λ̣η̣ροπαταγοφυ̣[.̣]ι̣[

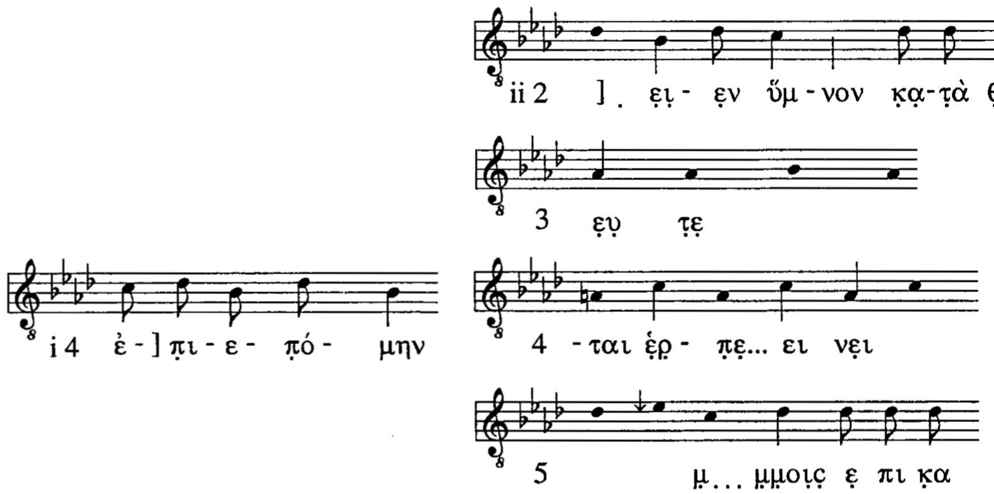
3 . . . .[

] ? ?[
4 __η̣ρ̣[. . .]. . .α̣π̣ο̣.ι̣δ̣ε̣τ̣ι̣πολυτ. .̣[

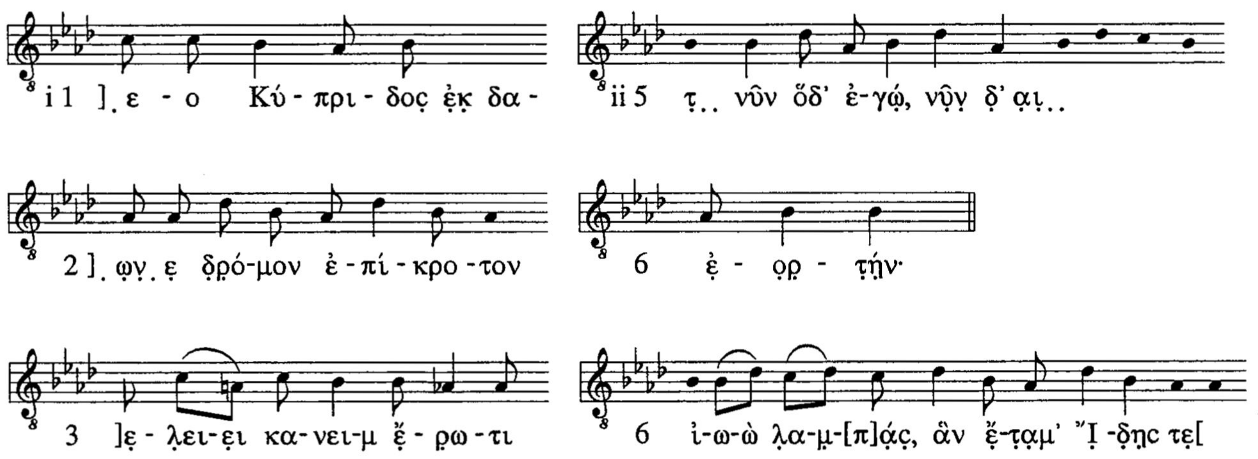
f Π̣ Λ̣ΥΠΛ Υ̣ Π̣ Λ̣Μ̣̄Π̣ ???[
5 τ̣. . νυνοδεγω̣νυ̣ν̣δα̣ι̣. .̣[. .̣]. . . . .[

ΥΠ ΛΜ Λ̣Μ̣ Λ ΠΥΛΠΥ Ұ ?[
6 ε̣ο̣ρ̣τ̣η̣νιωωλ̣αμ̣[.]α̣c̣ανε̣τ̣ . μι̣δ̣η̣cτε̣[.

Fr. 13 Col. i Col. ii


ii 2] . ε̣ι̣- ε̣ν ὕμ-νον κ̣α̣-τ̣ὰ θ̣εῖ-ον ἀ̣-θ̣λι-ο̣[
3 ε̣υ̣ τ̣ε̣
i 4 ἐ-]π̣ι-ε- π̣ό- μην
4 -ται ε̣ρ̣- π̣ε̣... ει ν̣ε̣ι
5 μ̣... μ̣μ̣οι̣c̣ ε̣ πι κ̣α̣

Fr. 15 Col. i Col. ii


i 1].ε - ο Κύ- πρι - δοc̣ ἐ̣κ̣ δα -
ii 5 τ̣.. νῦν ὅδ' ἐ-γ ω̣, ν̣ῦ̣ν̣ δ̣' α̣ι̣..
2]. ω̣ν̣.ε̣ δ̣ρ̣ό-μον ἐ-πί-κρο-τον
6 ἑ̣- ο̣ρ̣- τ̣ή̣ν·
3]ε̣- λ̣ει-ε̣ι κα-νει-μ ἔ̣- ρ̣ω-τι
6 ἰ-ω-ὼ λ̣α-μ̣-[π]ά̣c̣, ἂν ἔ̣-τ̣α̣μ' Ἴ̣-δ̣η̣c τε̣[

Fr. 15
The piece resembles in appearance the latter part of fr. 13, and may (with fr. 14) have stood fairly close below it.

Notation i 1 If the suggested placing of fr. 14 just above fr. 15 is correct, the notes Μ̣̄ Π̣ Υ Π in fr. 14. 3 probably stood over the syllables ε(–ο), Κυ, πρι, δο 6 Θ̣: Ε̣ would be a possible reading.

Text i 2 The melodic line implies the accentuation δρόμον ἐπίκροτον 3 -ειει perhaps the dative ending of an adjective, doubled because divided between notes (cf. no. 10. 12 π]εριχαρειει); the falling tone M̄ Τ (if M̄ approximates to Μ) would suit a circumflex accent, -εῖ, e.g. ὀξυβ]ελεῖ. Then prima facie κανεῖ μ' ἔρωτι 'will kill me with love', though the descending tone Μ Π conflicts with the accent. καίει was certainly not written 5 The Π is placed over the ε, implying -νοc εἰc, -ν ὃc εἶc, etc., rather than νοcεῖc.

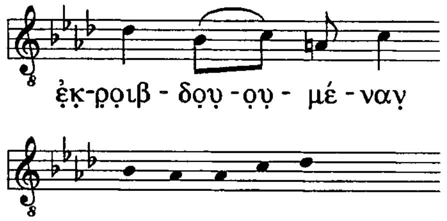
ii 2 Apparently τὸ(ν) ληροπαταγοφυ[c]ί[αν (vel sim.) Paragraphos and coronis after 4 marking the start of a new poem or extract 5 Apparently νῦν ὅδ' ἐγώ, νῦν... 6 ἑορτήν· ἰὼ λαμπάc, with the ω doubled because divided between two notes (sc. Π Λ). There seem to be three notes over λαμ[π]άc, if the faint Λ̣ and Μ̣ are both real. In that case two of them must be allocated to the syllable λαμ, though at this period the spelling λααμπαc would then be expected (cf. no. 21. 12 ἀαμπέχει, etc.). Then perhaps ἂν ἔταμ' Ἴδηc τέ[μπεcι.

Fr. 16

1]. . . .α̣ς̣

]Λ Π Ṃ̄ Τ Μ
2]. . .ε̣κ̣ρ̣ο̣ιβδο̣υ̣ο̣υ̣μεναν̣

]‒ ?Π̣ Υ̣ Υ̣ Μ̣ Λ̣?



Fr. 17

A scrap extending across two columns. The only legible letters are in col. i]α̣χ̣οcιτειμ̣ε̣[(τ]άχ̣οc ἴτε ἴτε is just possible, but not convincing) and in col. ii δ̣αcτε̣ρ̣α̣ . . .[and in the next line a Ζ̣. If this was a note, a different tonos from the prevailing Hypodorian is implied, e.g. Lydian or Aeolian.

Fr. 18

]? Λ Π Τ̣[
1]ν̣αξειει̣(.)ελ̣ε[

]? ? Θ̣ [
2]α̣βδα̣(.) λαβδα [

]? ? Υ̣ Υ̣ [
3].[

Fr. 19

1]. α̣. τ̣δ̣. η̣ν̣[ ]. . . .[

]? ?[ ] Λ̣ Λ̣ Π̣ Υ̣ Υ̣[
2]. . .λ̣ι̣π̣α̣παδεc̣ι̣. . .[

] Λ Υ̣ Π Λ̣ Π̣[
3]τ̣. . . .λ̣ε̣.ε̣π̣ι̣c̣τ̣. .[

Fr. 20

1].[.]α̣μ̣ο̣ν̣νεω. [

] Μ Ṃ̄ Λ [
2].c̣αξ αλααι αν̣[

]? Π̣[ ]? ?[

Fr. 21

1].[

]Ν̣ ? [
2]ενβοα̣τ̣ευβο̣α . . . .c̣ι̣υ̣ [

]Τ̣Υ ? [
3]τα. .αξυ̣[. . .].[.]ε̣τ̣ . . ξ[

Fr. 18 *Text* 1 ι̣(.): or ν̣, if ειει, probably melodic doubling of ει; any accent will have been circumflex (descending tone) 2 Presumably λ]άβδα λάβδα.

Fr. 20 *Text* 2 c̣: perhaps π̣ ἀλααί, apparently, but one may think of ἀλα<λ>αί.

Fr. 21 *Text* 2 βοᾶτ᾽ εὖ? But after the second βοα apparently a round letter.

Fr. 22

] Ν̣ ? ??[
]α̣υλαcουκ̣ε̣δ̣α̣ .[

On the back of the fragment is another, with no text surviving but the note-sequence Λ Μ Λ Π.

Fr. 23

]Π̣ ?[
1]ρ̣ο̣π̣οcιcωνακ .(.)α̣.[

] Ν̣ [
2]ο̣ειcξεινονα. . .τ̣α̣[

]Θ̣ Μ̣ [ ]Π̣[ ] ?[
3]οκρυοεντιδ̣ε̣χ̣α̣[

]Π̣[ ] Υ̣[

Fr. 24

1]. . .[

]Λ Μ [
2]ο̣ι̣κρε̣[

] Υ̣ ?[

Fr. 25

]? Λ̣Μ̣ Υ Λ[
1]δηηκαμνωμ[

]Π̣ ? Λ̣ [
2]. . . .[. .].[.]υ̣.δ̣. . . .[

Fr. 26

Γ̣ [
1 αλλατο̣ .[

Fr. 27

Traces from two lines of text (no letter legible), and between them the note-series Λ̣ Π Λ Π̣ Λ Π Ν.

Fr. 28

Π Υ Γ Δ[
1 βουλε̣ι̣ειδε[

Fr. 29

1]α̣ cυδ̣[

]Ν Υ ?[
2]ν̣ι̣π̣πα . λ̣[

Fr. 28 *Text* βουλε̣υ̣ει does not seem to have been written. If this is another melodic doubling, for βουλει, the large rising interval Υ Γ (a sixth) might suggest oxytonesis and thus an adverb, [ἀ]|βουλεί or the like, rather than the verb-form βούλει. But a division βούλει· εἰ δὲ is also possible.

Frs. 30–4

Five scraps with only a few letters apiece and no musical notes.

Fr. 35

1].[
2]υ̣ναικωγγαρο̣[
3]. .ι̣c̣ε̣ι̣δ̣α̣. .[
4]ε̣αρcενο.[
5]τ̣ωνδε̣[
6].καπ̣[

] Λ[
7]κ̣ε̣π̣[

Fr. 36

1]ω̣ιπριγκ̣.[
2].εν̣θε̣. .εα[
3]. . . .ρ̣η̣π̣ε̣π̣[
4]εθ̣αcπαν̣.[
5]π̣νουδε.[

] ?[
6]. ν̣α̣. .[

] Λ Μ̣[
7]ποντιω̣[

] Π̣ [
8].ε̣ι̣να̣[

] ? [
9]. .[

These two fragments have a similar appearance and layout—six or five lines of text without notation, then (after a gap) a new section with it—and they may have stood at the same level in the same column.

Fr. 35 *Text* 2 γ]υναικῶν γὰρ, with the nu assimilated to the velar 4 ἄρcεν(ο–).

Fr. 36 *Text* 1 i.e. πρὶν κ.[4 μ]έθαc παν-, -μ]εθα cπαν-?

Fr. 37

1]. .[

] Π [
2]. .λ̣ετο̣[

]Π̣[

Fr. 37 bis

]. . . . .[
1]. . ναṭ .[

]abraded[
2].λ̣ινε̣[

] Π [
3]αμε̣ι̣.[

] Π ?[

Fr. 38

] N Ṇ̄ Ỵ NY[
1]. . .ε̣ξα̣παο̣ν̣[

Fr. 39

Traces of about six lines, only a few letters legible. Visible notes in successive lines are Π (twice) and perhaps T.

Fr. 40

1]μ̣ελ̣λο̣[

]?[ ]Λ̣[
2].ε̣π̣[

]N Π̣ [
3].λ̣ι̣π̣[

Fr. 41

Col. i

1]ρ̣α̣τ̣ο̣

]
2]ψ̣ε̣ι̣ [

]
3]

Col. ii

NN NY N Μ̣[
ι̣τ̣ω̣ι̣τ̣ω̣κω̣μ̣ο̣c̣c̣ .[

] Λ M Ṇ [
ειcαμβαcινται .[

Π Λ Π Λ̣ Π̣[
.]. .δ̣. . . .[. . . .]. .τ̣.[

Fr. 41 *Notation* ii 1 The papyrus is broken off immediately above the notes, so that any N may have been N̄. N N̄ N, for example, would avoid the written repetition of consecutive identical notes, which is avoided in these early texts.

Text ii 1 ἴτω ἴτω κῶμοc 2 εἰc ἄμβαcιν, then perhaps ται̣ δ̣[ὲ.

Fr. 42

] Λ
1]ι̣δαλλο

] M N̄
2]ο̣πετραν

]? N N̄ [
3]ν̣ο̣ι̣τ̣ω̣[

] ΛΠ Λ[

Fr. 43

1]. . . . .[

]? Π Γ Π [
2]. ατ̣ιει δεινον̣[

]? Μ̣ Μ̣̄ Μ̣[
3]χ̣[.].ι̣λ̣[

Fr. 42 *Text* 1 δ' ἄλλο 2 πέτραν.

Fr. 43 *Text* 2 τίει, ἀτίει? Then presumably δεινόν, but if so, the melodic fall of a fifth goes against the accent.

Fr. 44

Λ ΜΛ̣[
1 ευη̣π̣ .ε̣[

Υ Δ [
2].[

Fr. 45

1]. .αν[

] Μ ? ?[
2]ε̣ν̣ο̣λλυν̣αιη̣δ . . . .[

]? Λ Γ̣ Υ̣ Λ ?[
3]. . . .τ̣ι̣ϲ̣π̣α̣. . .[

Fr. 45 *Text* 2 (ἐν)ολλύναι? 3 If interrogative τί or τίϲ, the high note is appropriate; see nos. 4. 9; 42. 2, 8; 53 fr.1. 6.

Fr. 46

A scrap on which the only legible letters are]α̣[δα]ι̣τ̣ο̣[(with αυ̣ written underneath [δα]) and for the next line the note-series Ν Υ Π Λ̣.

Fr. 47

A line-beginning υ̣ι̣. τα[and below it the notes Υ Λ Ν̣.

Fr. 48

A mid-line fragment]ι̣νχαλι̣φ[(χαλιφ[ρον-?) and below it the notes Λ Π Υ .

Fr. 49

1].[

]. Λ Μ[
2]δ̣ειvεντ̣ε.[

Fr. 50

1]. . ω̣ν̣[

]Π̣ Λ ?[
2]. . ντεϲε̣[

Fr. 49 *Text* 2 ὤ]δεινεν, εὔ]δειν ἐν, etc.

Fr. 51

Traces of two lines, only a few letters legible; between them the notes Λ Π Λ.

Fr. 52

A few letters from the beginning of the first line in a column; above the second line the note Ν.

Fr. 53

No text; consecutive notes (all uncertain) Μ Ρ Θ̄.

Fr. 54

Remnants of two lines; no notation.

Fr. 55

] Μ̣ ! Μ̣[
1]ρ̣π̣ο̣ε̣ϲ̣α̣(.)ρ̣μ̣α [

] ?[ ]?[

Fr. 56

1]θ̣ειπικ̣ρ̣ο̣[

] [
2]. .[

stripped
3]π̣. . .υ̣[

]? [
4].χ̣ειμ̣[

] Λ̣ [
5]τ̣εϲδ̣[

Fr. 55 The notes on the right are faint, and appear to have no text below.

Fr. 56 *Text* 1 Probably πικρό[ν.

These fragments, first published by M. L. West,[1] come from the same cartonnage as no. 5; possibly from the same roll, if we suppose that a fair portion of it remained blank after the final column of the *Achilleus* on the ↓ side and that the back of this portion (the left-hand part of the reversed roll) was used for the present texts. There is indeed no certainty that these fragments all come from a single roll. But they are linked by the common feature of being all written along the fibres, and in the absence of evidence to the contrary we may take it as a working hypothesis that we are dealing with one music manuscript.

We should expect such a manuscript to have contained a number of different items, and this is confirmed by the presence in two places of a paragraphos accompanied by a coronis. Most of the fragments are too exiguous to reveal anything about the nature of the texts. But we might expect them to be citharodes' repertoire, either excerpts from tragedies or citharodic nomes or dithyrambs. Some of them show clear signs of a lyric character. Fr. 4 is distinctly and elaborately lyrical, while in frs. 13–15 we seem to discern some kind of erotic verse in the left-hand column, and in the right a citharodic *sphragis* with literary-critical comment, followed by the start of a new poem which seems to allude to a festival and torches. Perhaps the poems were all the work of one author. The content of fr. 4 may recall Antiphanes' criticism of contemporary dithyrambists, whom he compares unfavourably with Philoxenus (fr. 207. 7–9 *PCG* II):

> οἱ νῦν δὲ κιccόπλεκτα καὶ κρηναῖα καὶ
> ἀνθεcιπότατα μέλεα μελέοιc ὀνόμαcι
> ποιοῦcιν ἐμπλέκοντεc ἀλλότρια μέλη.

On the most cursory perusal of these fragments it leaps to the eye that the most frequent notes by far are Λ Μ Π Υ, representing a segment of the diatonic Hyperphrygian (or Hypodorian) scale. The higher note Γ, which appears half a dozen times, also belongs in this scale, and there are about a dozen instances of Τ, which is the chromatic alternative to the diatonic degree Π. In three fragments (8, 53, 55) notes from the related Phrygian and Hypophrygian scales appear (Θ Ι Ρ).

The note Θ also appears in close association with Λ Π (fr. 4; 13 ii 5; 15 i 6; cf. 18), where it cannot be treated as Phrygian or Hypophrygian but apparently functions as a degree of the Hyperphrygian scale; it takes the place of the chromatic Κ and diatonic Η, which are absent from this whole set of fragments. This is paralleled in the Zeno papyrus (no. 8): there too the lowest note is Υ, and the scale runs Υ Π Μ Λ Θ (no higher note appears in the fragment). The Θ in place of Η must represent a slightly flattened note, giving an interval above Λ of something like three-quarters of a tone instead of a full tone.[2] The interval Θ Γ is then 1¼ tones. This arrangement of intervals in the tetrachord Μ–Γ, ½ + ¾ + 1¼ tones, is one recognized by Aristoxenus, who calls it 'soft diatonic' (διάτονοc μαλακόc, *Harm.* 2. 51), and it resembles what Ptolemy calls 'tense chromatic'.[3] The combination of this in the upper tetrachord with the regular 'tense' diatonic in the lower seems to be prohibited by Aristoxenus, but it is recognized by Ptolemy: it is

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[1] West (1999).

[2] Not a semitone, because in no. 8 Ι and Κ also appear as 'accidentals' between Λ and Θ; see the discussion of that fragment.

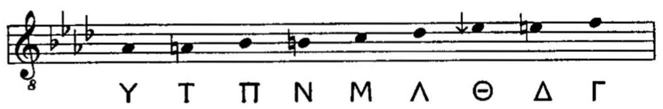
[3] χρῶμα cύντονον, *Harm.* 1. 15 and 2. 14, pp. 35. 7 and 72. 4 Düring: ratios 22:21, 12:11, 7:6, i.e. 81 + 150 + 267 cents.

incorporated in the kithara tuning that he calls τρόποι and the lyra tuning that he calls μαλθακή.[1]

The standing notes Μ and Γ, despite being the Mesai of the Phrygian and Hyperphrygian scales respectively, do not stand out as being of especial importance in the melodies; Λ, Π, and Υ are all more frequent. We should attempt to evaluate the music on its own terms, without assuming that the choice of notation-key is more than arbitrary. Musically the effective tetrachord seems to be Υ Π Μ Λ, cutting across the theoretical semitone–tone–tone tetrachords of the Phrygian scale system and showing a tone–tone–semitone structure.

Two further 'irregular' notes appear: Ν (20 times) and Δ (twice, at frs. 28 and 44. 2). We have already met Ν in the context of the Λ Μ Π Υ scale in no. 5, where it is even more prominent, and we observed that it represents a flattening of the standing note Μ. Δ occupies the corresponding position in the upper tetrachord, a semitone below the standing note Γ.

The accompanying diagram shows the notes in their places on a modern stave.



Although we cannot follow any melodic line very far—the longest uninterrupted note-sequence is of thirteen notes—some observations may be made. Melodic intervals seldom exceed a major third: rising fourths appears in frs. 1, 6, 15, 45, and 53, rising and falling fifths in fr. 43, rising sixths in frs. 28 and 44 (diminished), and a falling sixth in fr. 45. There is a tendency to oscillate between two notes separated by a semitone (frs. 13, 15, 16, 44), a tone (frs. 13, 14, 55), a minor third (frs. 19, 27, 38, 41, 42), a flattened fourth (fr. 4), or a fifth (fr. 43). Once we find the four notes of the effective tetrachord in descending sequence (fr. 14: Λ M̄ Π Υ, if M̄ may be treated as Μ), but otherwise we do not find even three successive scale degrees together. More typical is a 'pentatonic' type of progression, in which one of the inner notes of the tetrachord is passed over, as in fr. 1 Λ Μ Υ; 2, 13, 19, 48 Λ Π Υ; 19 and 46 Υ Π Λ; in fr. 15 cyclically Υ Λ Π Υ Λ Π Υ, and again after the coronis Π Λ Υ Π Λ Υ...Υ Π Λ...Λ Π Υ Λ Π Υ.

The 'accidentals' are mainly used to create semitone or minor third intervals that vary the basic structure of the tetrachord. In fr. 6 we find minor thirds (Τ Μ, Υ Ν Υ); so too in frs. 13 and 16 (Μ Τ oscillating), 29, 38, 41 (Ν Υ Ν, resolving with a rising semitone to Μ); in frs. 8 and 41 descending semitone slides (Π Τ Υ [also in the Zeno papyrus], Λ Μ Ν); descending semitones also in frs. 21 (Τ Υ), 28 (Γ Δ), 37 (Π Τ), 40 (Ν Π). The leap from Υ to Δ (diminished sixth) in fr. 44 is exceptional.[2]

Not much can be said about the relationship between melody and accent, as the identification of words is often uncertain. There is reasonable agreement in frs. 13 i 4; 14; 15 ii 6(?); 42. 2; on the other hand there appear to be clashes in frs. 1 i 4; 4. 1; 6. 7; 13 ii 2; 15 i 3; 16. 2; 43. 2.

When a long vowel or diphthong is to be divided between two notes, this is indicated by writing it double, not (as in the Roman period) by a double point and/or bracket in the notation: fr. 15 i 3]ε̣λ̣ειε̣ι, ii 6 ιωω, 16. 2 ε̣κ̣ρ̣οιβδο̣υ̣ο̣υμεναν̣, 18.1 αξειε̣ι̣, 25.1 δηη.

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[1] See West 2 (1992), 171 f.

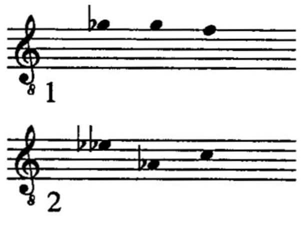
[2] Perhaps it resolved to Γ, cf. the sequence Υ Γ Δ in fr. 28.

No. 7 PAP. HIBEH 231 Third century BC

Fr. 2

1]̣.Β‿ΒΓ̣[

2]Κ̣Υ̊͡Μ[



Fr. 3

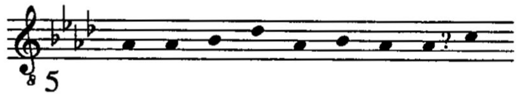
1] Ϲ̣ [

2] Α̣ Ο̣ [

3] Ξ̣ Θ̣ [

4] Γ̣ Ρ̣ [

5]..Υ͡ΥΠΛΥ̣ΠΥΥ̣.Μ̣[



Notation Fr. 2 1]̣.: the lower part of an upright Γ̣[: Π̣[possible but less good 2 A small circle above Υ may be intended for a stigme marking the arsis. Fr. 3 4 Γ̣ might be a cursive Ν̣ Ρ̣ doubtful.

Pap. Hibeh 231, first published by E. G. Turner[1] and now in the British Library (Pap. 2996), consists of three small, abraded fragments of papyrus dating from the mid third century BC. They apparently come from some treatise on music with examples in notation. Fr. 1 contains no notation and is not reproduced here; it contains a mention of the Lydian ἁρμονία, and perhaps of a ψαλτήριον. Frs. 2 and 3 have notation only. That in fr. 2 and in line 5 of fr. 3 evidently represents melodic sequences. Lines 1–4 of fr. 3, written in smaller writing than line 5, seem to be some sort of table of notes.

The notes Β Β Γ are at home in Dorian or Hyperdorian, whereas Κ Υ Μ look like chromatic Hypodorian (or Hyperphrygian). The notes in fr. 3. 5 are characteristic of diatonic Hyperdorian/Hyperphrygian; notably similar sequences occur in nos. 6 and 8.

The purpose of the note table in fr. 3. 1–4 is obscure, and the readings cannot be guaranteed. If they are correct, the three preserved note-pairs all yield intervals of a fifth or sixth.

---

[1] Turner (1955), 152; republished by West 1 (1992), 2–4; see pl. 1a.

No. 8 PAP. ZENON 59533 Third century BC

]Λ Π Λ Μ Υ Π Μ Υ Μ[
1]κ̣οι τα δε τα ρω νι κε τιν αυ̣[

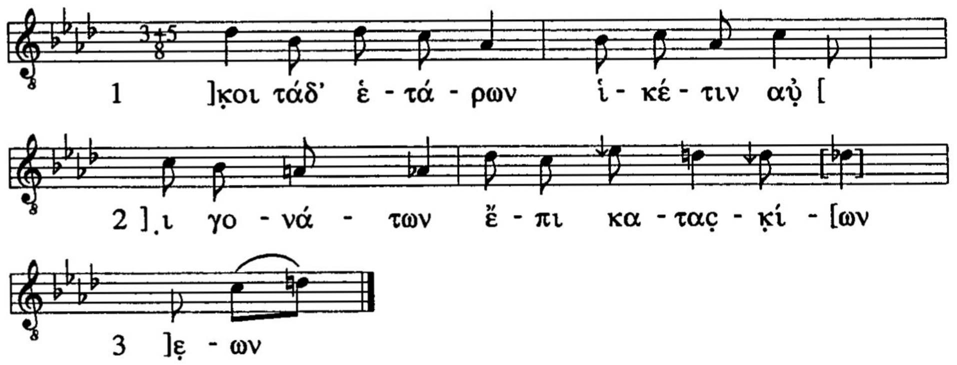
]Μ̣ Π Τ Ұ Λ Μ Θ Ι Κ̣[Λ]
2] ̣ι γο να των ε πι κα τα ϲ̣κ̣[ιων

]. Μ͞Ι͞
3]ε̣ων

4 Πι

5 επΠ̥ι

Notation 2 Μ̣ West, – or ⊥ Mountford (1931), 98 Τ Mountford, Τ or Υ Schubart: see Mountford (1931), 95 Ұ pap.: see comment Κ Mountford (1931), 97, Ν̄ Del Grande (1935), 370, Μ Gombosi (1939), 128 3 Μ͞Ι͞ Gombosi (1939), 127 f., Ν̄ Mountford (1931), 99.


3+5/8
1]κοι τάδ' ἑ - τά - ρων ἱ - κέ - τιν αὐ̣ [
2].ι γο - νά - των ἔ - πι κα - ταϲ̣ - κ̣ί - [ων
3]ε̣ - ων

Text 1]κ̣ West 1 (1992), 5,]c Mountford (1931), 91 2]ει Edgar,]θι Schubart: see Mountford (1931), 93, 99 ϲ̣κ̣[ιων West 1 (1992), 5, cπο[or cπε[Edgar: see Mountford (1931), 99 3]ε̣ων West 1 (1992), 5,]δων Mountford (1931), 91.

This much-discussed fragment,[1] dated by C. C. Edgar to about 250 BC, was acquired together with a quantity of Zenon papyri. It was first published by J. F. Mountford in 1931.[2]

The left and right margins are broken off, while the top has apparently been cut away. The remaining text occupies only the upper third of the piece. The syllables are separated by spaces; cf. nos. 17–18, 42–43, 46, 50, 55. Below the text there is a subscription consisting of a Ϡ, the Ptolemaic form of sampi = 900, followed by the same sign again with the middle upright decoratively prolonged downward and finished with a circle,[3] this being preceded by επ(η), 'verses'.[4] If one may take the two sampis as having stichometrical significance, the fragment must be from the end of a roll. C. Del Grande assumed that the subscription must have stood in the centre of the column, and tried to deduce the original line-length and devise supplements on this basis, which is however uncertain.[5]

The metre appears to be dochmiac (West), or perhaps paeonic (Kannicht–Snell). The melodic line is in accord with the word accents of ἱκέτιν and ἔπι (if the preposition is in anastrophe), but not with those of ἑτάρων, γονάτων, or κατασκί[ων, which points to a strophic composition. Together with the diction and subject-matter—apparent references to a female suppliant and to knees (of a god's statue?) that are shaded over (?), *sc.* with the suppliant's boughs[6]—all this suggests that the fragment may, as Mountford conjectured, be from a chorus of a tragedy.

The preserved note-symbols are Υ Τ Π Μ Λ Κ Ι Θ. Of these, Τ Κ Ι appear to be 'accidentals', and Υ Π Μ Λ Θ degrees of a basic scale. We have seen the same scale in no. 6; see the discussion there (p. 38 f.), where it is argued that the interval between Λ and Θ was one of three-quarters of a tone. In line 2 of no. 8 the two notes Ι and Κ appear as 'accidentals' between Λ and Θ. We must suppose that the sequence Θ Ι Κ represents a descent by successive quarter-tones, trisecting the ¾-tone scalar interval.

The interpretation of the sign Ɏ and the barred note or notes in line 3 is problematic. In nos. 5–6, similarly, certain notes sometimes appear with a bar above them (Θ̄ Μ̄ Ν̄ Τ̄) or through them (Ɏ). Mountford identified Ɏ with ✱ (*g*′ double sharp), the note an octave above Τ, but musically this is most unlikely. Del Grande took the bars as the diacritic marking chromatic notes; but this appears only in late sources, and only with the upper note of a chromatic pyknon.[7] By this convention we should expect a tetrachord Φ Υ Τ̄ Μ. O. J. Gombosi interpreted the bar as the diseme sign.[8] That seemed satisfactory so long as only the Zenon papyrus was in question. But it now seems that it must be given up, as in nos. 5 and 6 the barred symbols appear above short syllables in several places, as well as above the second element of the divided long vowel in no. 6 fr. 16 ε̣κ̣ρ̣ο̣ιβδο̣υ̣ο̣υ̣μεναν̣.

---

[1] Edgar (1931), 2 f., pl. II; Del Grande (1932), 91–6; Mountford (1933), 260 f.; Del Grande (1936); Winnington-Ingram (1936), 32 f., 40, no. 1; Marrou (1939); Gombosi (1939), 127 f.; Norsa (1939), pl. 3; Del Grande (1946), 135; Sedgwick (1950), 222; Winnington-Ingram (1955), 67, no. 3; Wagner 2 (1955), 115; Winnington-Ingram (1958), 9; Del Grande (1960), 153, 227, 440–3, 475; Kannicht (1981), 264, no. 678; West 1 (1992), 4 f.; 2 (1992), 287.

[2] Mountford (1931). The original was collated for him by Edgar, Gunn, and Schubart. See fig. 5.

[3] Examples of this form of the numeral in Edgar (1931), no. 59732. 8; no. 59753. 8 and 14; no. 59762. 4. Middle upright prolonged downward and ending in a semicircle: no. 59723. 18. Cf. Gardthausen (1913), 368 f.

[4] Cf. Isocr. 12. 136; Diog. Laert. 1. 34, 61, and passim; cf. Gardthausen (1913), 71 ff.

[5] Del Grande (1936), 370.

[6] Cf. Aesch. *Supp.* 346, 354, 656.

[7] Del Grande (1936), 377 f.; Alypios p. 384 J.; Boeth. *Inst. Mus.*4. 3–4.

[8] Gombosi (1939), 127 f.

Any hypothesis must take two observations into account. Firstly, the barring seems to be limited to the notes Θ Μ Ν Τ Υ. Secondly, whereas in the Hellenistic period repeating notes are in principle written only once, so that we do not expect successions such as ΝΝ, we do find in nos. 5 and 6 the successions Μ Μ̄, Μ̄ Μ, Μ Μ̄ Μ, Ν Ν̄, Ν̄ Ν, implying that the bar signifies some real modification. It can hardly be a modification of pitch, as the alphabetic system provides sufficient other resources for denoting fine intervals. Perhaps we should suppose the bar to mean that the same note is sung, but in a different way, or with some difference in the musical accompaniment. Nos. 5 and 8, at least, were presumably accompanied by an aulete, and there were various ways in which he might vary his tones. On the other hand it seems unlikely that an instruction to the aulete would have been included in the vocal score.

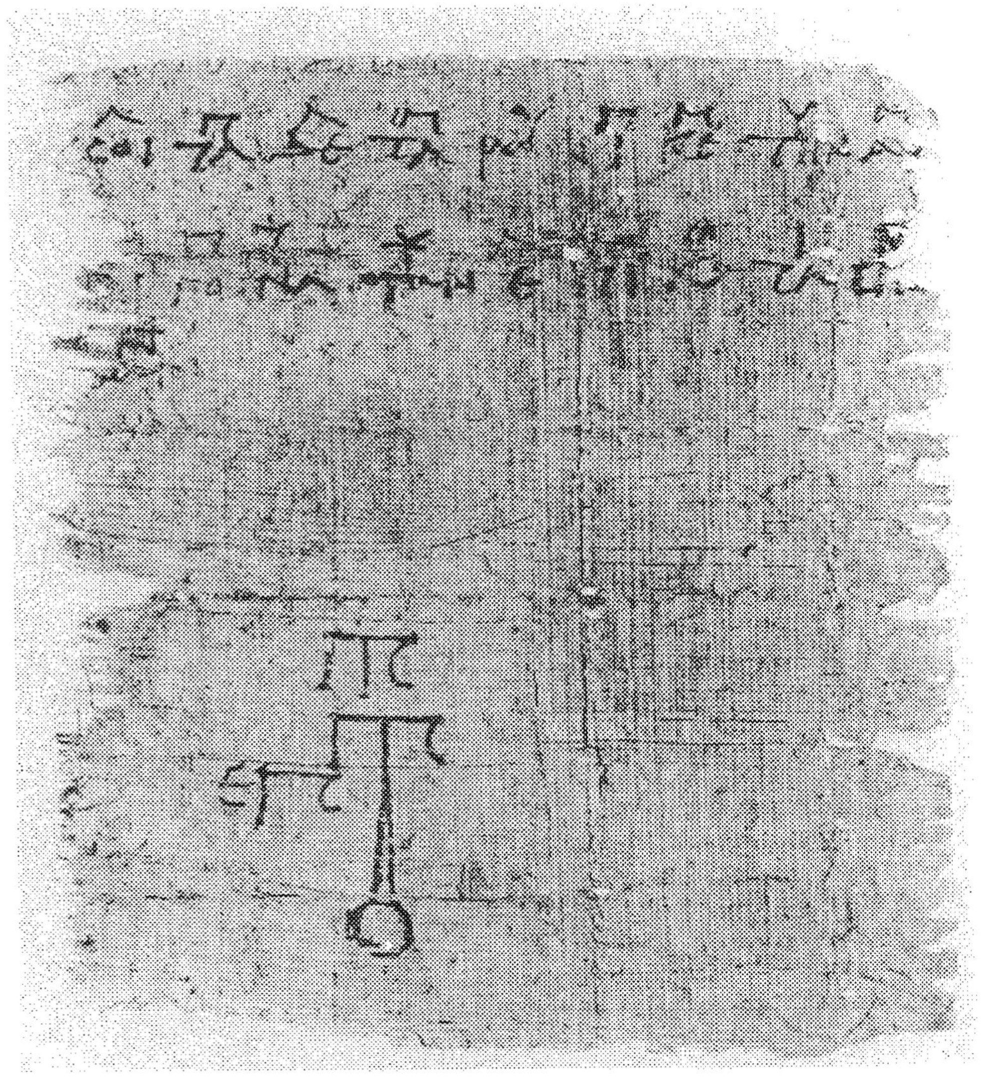


FIG. 5: Pap. Zenon 59533

No. 9 PAP. VIENNA G 29 825 a/b recto Third–second century BC

] !̣ Ḥ [
1]θ̣εα̣εχθρανυ[

] I P C[
2]ναδαπεδο[

]M I P [
3]ητανδεροτ[

]C̣ PI ? [
4]εδηημιγα̣[

] P M I Φ[
5]α̣λ̣ιδοφορον[.....]ι̣κα[

]C φρυ|γιcτι M [ ]H P Ṃ [
6]οιcχ ταυτ̣ . . βαθοcηζε . . [

] Φ Ṃ C PC̣[
7]μ̣εναιθ̣υ̣γατρεcγαλαθ̣η̣[

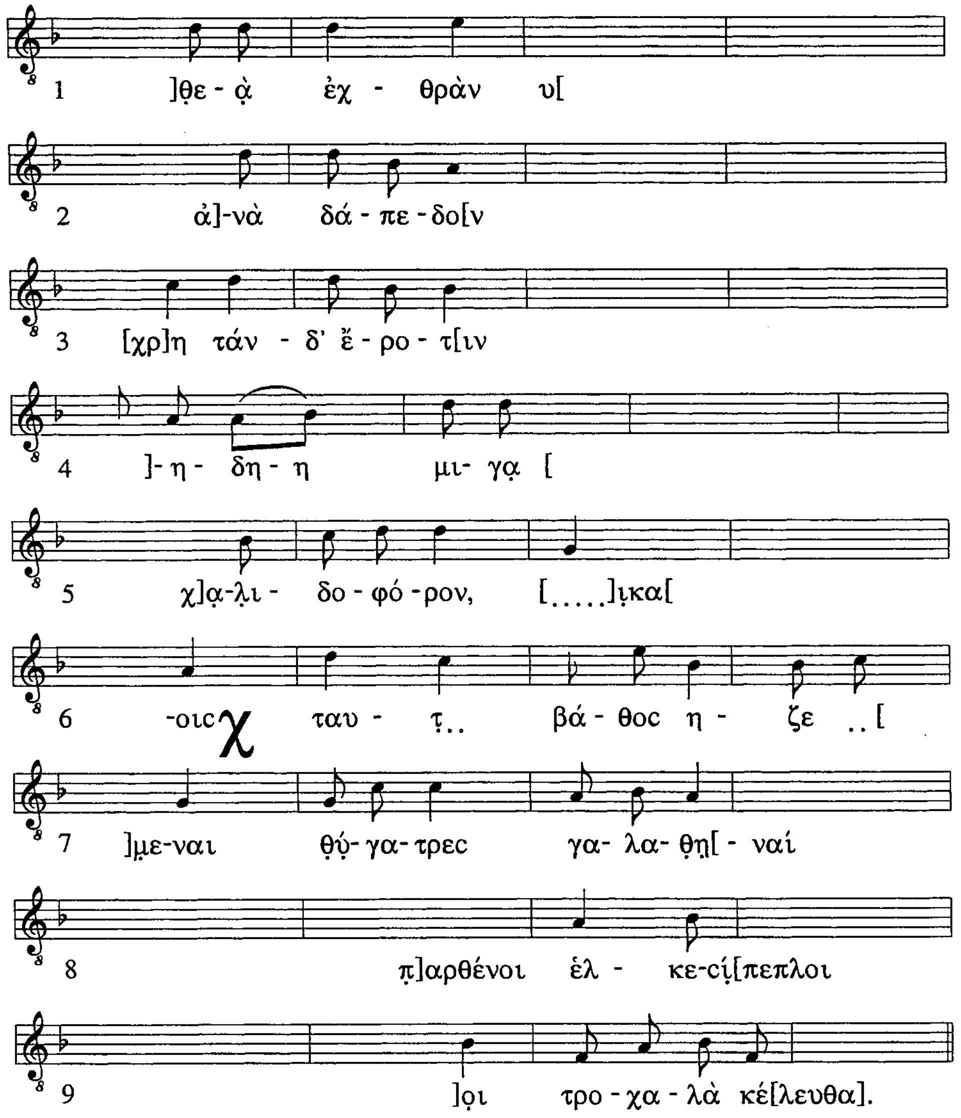
] C P[
8]π̣αρθενοιελκεcι̣[

] PR C P Ṛ[
9]ο̣ιτροχαλακε[

Lines 1–7 on fr. a, lines 5–9 on fr. b

Notation 1 !̣, not Γ̣ Hunger (1962), 57 H or M West 4 C̣ or Γ̣ Hunger (1962), 57 6 φρυ|γιc̣τ̣ι̣ Hunger (1962), 56 M and Ṃ Pöhlmann, M or Ḥ Hunger (1962), 57 7 Ṃ or Ḥ Hunger (1962), 57 C̣ over θ̣ Pöhlmann 9 R and Ṛ Pöhlmann (1962), 67 f., ⊏ and ⊏̣ pap.

Text 1]θ̣εὰ̣ Hunger (1962), 56, θ̣ or ο̣ or ω̣, α̣ or λ̣ (e. g. ἥ]θ̣ελ̣') Kannicht (1981), 264, Pöhlmann 2 ἀ]νὰ δάπεδο[ν Hunger (1962), 63, e. g. -ομέ]να West -δο[ν, not -δω̣[Pöhlmann, thus not]ν· ά δ' ἀπέδω̣[κε Kannicht (1981), 265 3 χρ]ὴ Hunger (1962), 61 ῥοπ̣[άν Hunger (1962), 61, 63: π̣ or better τ̣ (e. g. τάνδ' ἔροτ̣[ιν comparing Eur. *El.* 625) Kannicht (1981), 265, τ[, not π̣ West, Pöhlmann 4]εδηη: a melism like no. 10. 12 π]εριχαρειεῖ Kannicht (1981), 265 μιγα̣ Hunger (1962), 56: α̣[or δ̣[or λ̣[Kannicht (1981), 265, Pöhlmann: e. g. μίγδ̣[α or μίγδ̣[ην Kannicht (1981), 265, μιγά̣[δ West 5 χ]αλιδοφόρον Hunger (1962), 56, 62, Pöhlmann, α̣λ̣ or better λ̣α̣ (λαϊδοφόρον) Kannicht (1981), 265,]α̣αιδ- (κλ]αιδοφόρον with melism like line 4) West ι̣κα Pöhlmann, West,]υ̣c̣α[or]ι̣c̣α[Hunger (1962), 56, 64 6]οιc, followed by a chi-like sign: Pöhlmann ταυτ̣.. Pöhlmann, ταυτ[.]. Kannicht (1981), 265, τ̣α̣υ̣τ̣[.]ι̣ West, ταὐτ[ὸ]ν̣ Hunger (1962), 56, 64 ηζε..[Kannicht (1981), 265, Pöhlmann, ηζετ̣ο̣ i. e. ἵζετ̣ο̣ Hunger (1962), 56, 64 7]μ̣εναι West, Pöhlmann, ι̣εναι Hunger (1962), 56 γαλαθ̣η̣[ναί Hunger (1962), 56, 64, γάλα θ̣η̣[c- Kannicht (1981), 265 8]π̣α Pöhlmann, π]α Hunger (1962), 56, 61 ἑλκεcί̣[πεπλοι Diggle (1990), 150, ἑλκεcί̣[χειροι Hunger (1962), 64 9]ο̣ι West,].ι Hunger (1962), 56 κέ[λευθα Hunger (1962), 64.


1]θ̣ε - ὰ̣ ἐχ - θρὰν υ[
2 ἀ]-νὰ δά - πε - δο[ν
3 [χρ]η τάν - δ' ἔ - ρο - τ[ιν
4]- η - δη - η μι- γα̣ [
5 χ]α̣-λ̣ι - δο - φό - ρον, [.....]ι̣κα[
6 -οιcχ ταυ - τ̣.. βά - θοc η - ζε ..[
7]μ̣ε-ναι θ̣ύ̣- γα - τρεc γα- λα- θ̣η̣[- ναί
8 π̣]αρθένοι ἑλ - κε-cί̣[πεπλοι
9]ο̣ι τρο - χα - λὰ κέ[λευθα].

Our nos. 9–14 are a group of small scraps in Vienna that were found with the *Orestes* fragment. They were mentioned by C. Wessely, O. Crusius, and H. Gerstinger,[1] but remained for long unpublished. A drawing and a transcription by Wessely, dated 4 October 1922, and missing no. 12, were found among the papers of R. Wagner,[1] who studied the fragments sometime before 1934. He used a photograph of nos. 9–14 in which no. 14 is broken into three pieces, though in Wessely's drawing they are still united.

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[1] Wessely (1891), 18, 23; Crusius (1893), 200; Gerstinger (1936), 309.

These preliminary drafts by Wessely and Wagner, as well as the original papyri, were available to H. Hunger and E. Pöhlmann when they edited the fragments in 1962.[2] R. Kannicht revised the text of the verses from photographs in 1981,[3] and Pöhlmann has recollated the originals for the present edition.

Fragments a and b of G 29825 are written on both sides of the papyrus, the verso being in both cases inverted with respect to the recto; clearly the two fragments belong closely together, and by matching the fibres Hunger was able to combine them. Our no. 9 is the recto of the combined fragment and no. 10 the verso. The hand is to be dated to the end of the third century BC.[4]

In no. 9 nothing of the upper or lateral margins is preserved. Lines 5–8 are compatible with an anapaestic or dactylic metre. Epic correption appears in 8 and perhaps in 1 (if the third letter is α). The piece might come from tragic lyrics, and Kannicht included it in his edition of the Tragic Adespota as F 679. 1–10. τάνδ' ἔροτ[ιν in line 3, on the other hand, if correctly read, may point to a dithyramb or other festival composition.[5]

The notes R Φ C P M I (*f g a b♭ c′ d′*) are diatonic Lydian.[6] The only other note (perhaps) appearing in the fragment is H (lines 1 and 6); we say perhaps, because M is not written very differently, and may be a possible reading. In 6 the note-series I M H P M is headed by the explicit signature φρυγιϲτί, which is accompanied by a great chi-like sign in the text, explained by Kannicht as a double diastole.[7] M and I are common to the Lydian and Phrygian scales; the chromatic Phrygian contains also H (*e′*), but not P, while the Hypophrygian contains both H and P, though a scale containing both M and H would be one in which a diatonic tetrachord (*a b♭ c′ d′*) was continued upwards by a chromatic one (*d′ e♭′ e♮′ g′*).

As in the other Vienna fragments, and as is normal for the period, repeating notes are written only once.[8] There is no rhythmical notation in this piece. There may be an example of a syllable divided between two notes being written with doubled vowel (4 εδηη). In lines 1–5 (the pre-'Phrygian' part) there seems to be good agreement between melody and accent (reading 1 ἐχθράν, 2 δάπεδον, 3 ἔροτιν, 5 -φόρον), but thereafter we find clashes in †ηζετọ (if a verb form is rightly discerned), θύγατρεϲ, and γάλα (if a separate word). So the 'Phrygian' section, at least, may have been strophic. Hunger's supplement ταὺτ[ὸ]ṿ in 6 would give another clash, whereas e.g. ταύτ[η]ị would not. 9 τροχαλά is again in accord with the melodic movement.

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[1] In the possession of the Musikwissenschaftliches Seminar of Munich University.

[2] Hunger–Pöhlmann (1962); re-edited in Pöhlmann (1970), 84–92.

[3] Kannicht (1981), 264–80 (F 679–86).

[4] Hunger (1962), 53–5; see figs. 6 and 7.

[5] Cf. no. 5 fr. 15 ii 6.

[6] The R, which is in principle a B modified by being left open at the base (βῆτα ἐλλιπέϲ, Alypius p. 369. 5 Jan etc.), appears in the unusual form ⊏ , also found in no. 13. It was identified as R by Wagner; cf. Pöhlmann (1962), 67; (1966), 503 f.

[7] Kannicht (1981), 265. For other examples of the diastole (a mark of separation) see nos. 3. 5, 6; 10. 3,7; 14. 4.

[8] See p. 15.

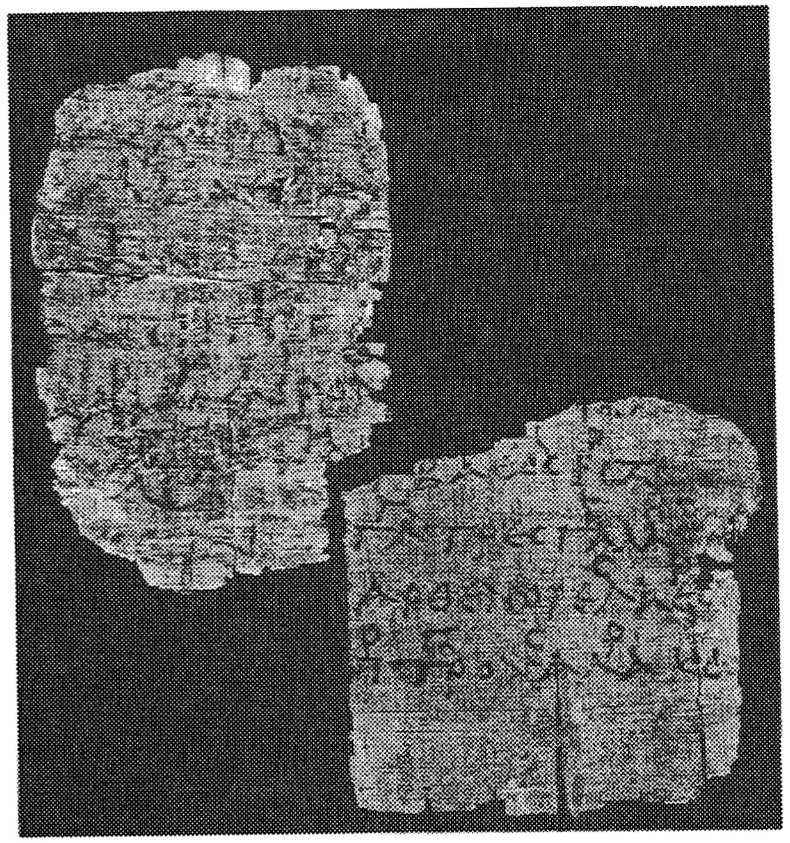


FIG. 6: Pap. Vienna G 29825 a/b recto

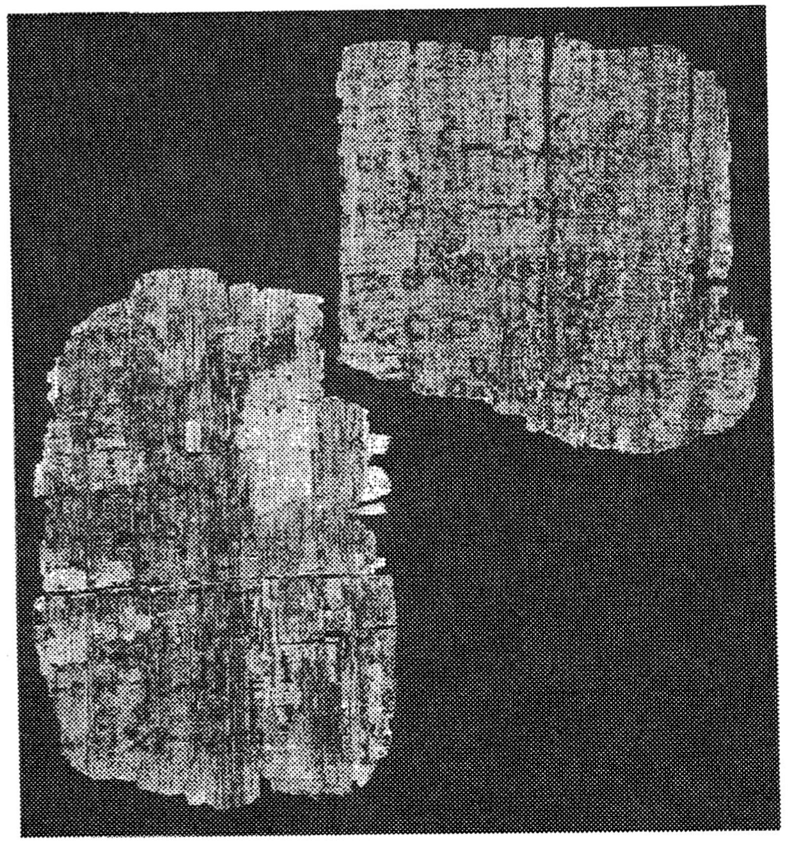


FIG. 7: Pap. Vienna G 29825 a/b verso

No. 10 PAP. VIENNA G 29 825 a/b verso Third–second century BC

] C Π C P
1].cεναγκαλιcμα

] Ρ̣ Φ C P
2]ọιcυμεṫάν̇α̣ρι

] Π Φ
3]..[.....] ποθω̣νκορειτιc⁊

] C N Ƶ
4].ων̣[...]κορακαcοcοικαιcε

] C Φ O Z O C
5]π̣ολυcπαν[....]ọθοιεαχαιων

] Ọ I Ṃ[
6].υν̣με̣λι̣[.(.).]η̣..[

] [
7]ρομιδοc⁊α̣[...].[

] M [
8]αταωιθ̣....[

] ? Φ Γ[
9].αματαc[....].[

]Ç Ṃ Θ [
10]..νθεν[..]..[

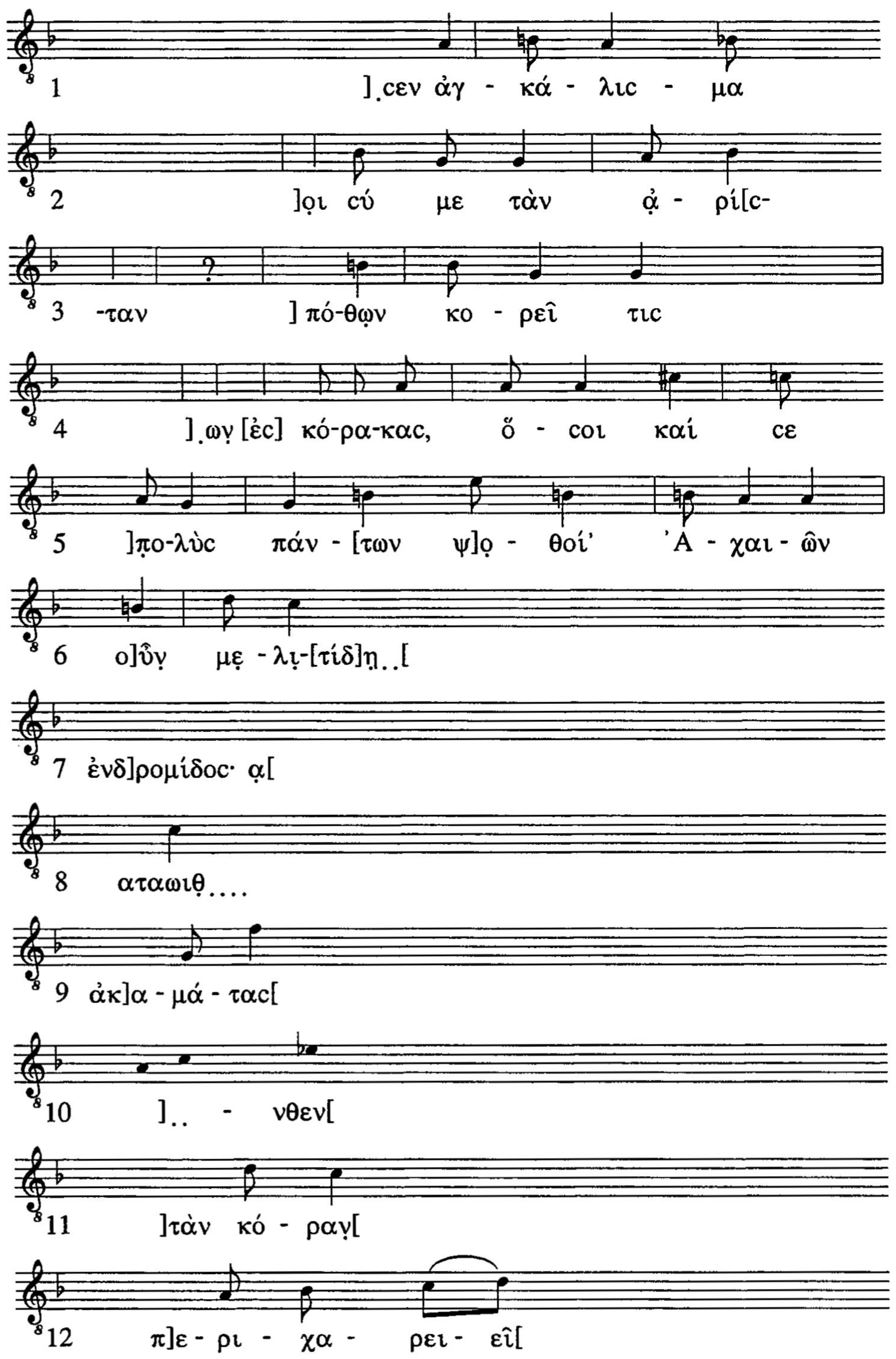
...ι̣c̣τ̣ι̣I M [
11]ταν κοραν̣[.]...[

] C P M I [
12]εριχαρειει[..]..[

Lines 1–5 on fr. b, lines 3–12 on fr. a ↓

Notation 4 C and Ƶ Pöhlmann, Ç and Χ̣ Hunger (1962), 57 5 Z Pöhlmann, Ẓ Hunger (1962), 57 6 Ọ Pöhlmann, C Hunger (1962), 57 11 [λυδ]ι̣c̣τ̣ι̣ Hunger (1962), 58 f.

Text 1].cεν Pöhlmann,].cε̣ν̣ Hunger (1962), 57 f. 2]ọι Pöhlmann,]οι Hunger (1962), 57 ṫὰν̇ : τον corrected to ταν α̣ρι- (e. g. ἀρίδακρυc) or ε̣ρι- (e. g. ἐρικύμων) Kannicht (1981), 265, ἀ̣ρί[cταν Diggle (1990), 150, ε̣ρι Hunger (1962), 58 3 πόθω̣ν (not πόθον) West, Pöhlmann, ποθω̣̂ν Hunger (1962), 57 κορεῖ Kannicht (1981), 265, Pöhlmann (the iota set close as often), κόρε Hunger (1962), 65 4 .ων̣[...]κορακαc Pöhlmann (not κεc or κοc), ων [ἐc] κ̣όρ̣α̣κα̣c Hunger (1962), 57 6 .υν̣με̣λι̣[.(.).]η Pöhlmann: sufficient room for με̣λι̣[τίδ]η̣ as iota is often set close (lines 1, 3, 4, 5, 8, 12),]ọῦν̣ με̣λι̣[τίδ]η̣ Hunger (1962), 57, 64 f. 7]ρο Pöhlmann,]ρ̣ο Hunger (1962), 57 8]ατα ὦ ιθ̣[Hunger (1962), 57, 64, Pöhlmann, not]ατ̣η̣ or]αι̣κ̣ 9].αμα Pöhlmann,]..μα Kannicht (1981), 266, ἀ]κ̣αμάταc Hunger (1962), 57, 65 10]..νθεν[Pöhlmann, τὸ [φα]νθὲν Hunger (1962), 65 11]ταν Pöhlmann,]τ̣αν Hunger (1962), 58 ραν̣[West, ραν[Hunger (1962), 58.


1].cεν ἀγ - κά - λιc - μα
2]ọι cύ με τὰν ἀ̣ - ρί[c-
3 -ταν]πό-θω̣ν κο - ρεῖ τιc
?
4].ων̣ [ἐc] κό-ρα-καc, ὅ - coι καί cε
5]π̣ο-λὺc πάν - [των ψ]ọ - θοί' Ἀ - χαι - ῶν
6 ο]ὖν̣ μ̣ε - λι̣-[τίδ]η̣..[
7 ἐνδ]ρομίδοc· α̣[
8 αταωιθ̣....
9 ἀκ]α - μά - ταc[
10].. - νθεν[
11]τὰν κό - ραν̣[
12 π]ε - ρι - χα - ρει - εῖ[

Part of the upper and right-hand margins of no. 10 is preserved. Lines 2 and 4 do not extend so far to the right as 1, 3, and 5. In 3 and 7 there are diastolai, and in 11 a modulation signature as in no. 9. 6. The hand shows cursive traits; sometimes letters like iota are set close.

Lines 1–5, at least, are compatible with iambo-choriambic metre, with catalexis at 3 and 5 and probably after 2/3 ἀρί[cταν]; in line 4 (καί) perhaps there is a syncopated iambus. Apparent hiatus at 5 (and perhaps 8) is to be interpreted as *scriptio plena* of an elided vowel.

The composition is dramatic in nature. A female speaker (2) addresses abuse (4–5, 6?) to an 'Achaean' (5), presumably one of those who fought at Troy. It appears that a high-born Trojan woman (2 με τὰν ἀρί[cταν]) is berating the Greek hero who plans to make her his ἀγκάλιcμα (or ἐναγκάλιcμα, 1), and threatening that he will suffer for it (3 πόθων κορεῖ τιc, 'someone will give you your fill of lusts'). We may guess that the two persons in question are Andromache and Neoptolemus, with allusion to the latter's violent death at Delphi; the κόρα in 11 might be Hermione. A tragedy seems a likely source of these lyrics, even though the expression [ἐc] κόρακαc (4) dips below the usual tragic level. Μελι[τίδ]η in 6 would lie even more clearly in the comic register (cf. Ar. *Ran.* 991; Men. *Aspis* 269). Thus one cannot dismiss the possibility that no. 10 is a fragment of a satyr play in Trojan context. R. Kannicht included the piece as a possible satyr play in his Adespota[1] because of line 5.

The segmentation implied by diastole and modulation signature is confirmed by the music. Lines 1–3, with the notes Φ C P Π (*g a b♭ b*), are chromatic Lydian, while 4–6, with Φ C O Ƶ N Z (*g a b c′ c#′ e′*) are chromatic Hypolydian. In both cases, as perhaps in no. 9. 6 (see above), only the upper tetrachord is chromatic, the lower being diatonic. Line 6, with C M I (*a c′ d′*), is diatonic Lydian; 8–10, with Φ C M Θ Γ (*g a c′ e♭′ f′*), diatonic Hypophrygian; and 11–12, following the modulation signature, diatonic Lydian again (C P M I = *a b c′d′*).

As in no. 9, repeated notes are not written out, and there is no rhythmical notation. A syllable divided between two notes is written with doubled diphthong (12 π]εριχαρειεῖ). The melodic line goes against the word accents in each word of line 5, as well as in 9 ἀ]καμάταc, and in 12 π]εριχαρεῖ it rises instead of falling on the circumflex. Once again, strophic composition is indicated.

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[1] Kannicht (1981), 265 f.; the fragment is F 679. 11–22.

No. 11 PAP. VIENNA G 29825 c Third–second century BC

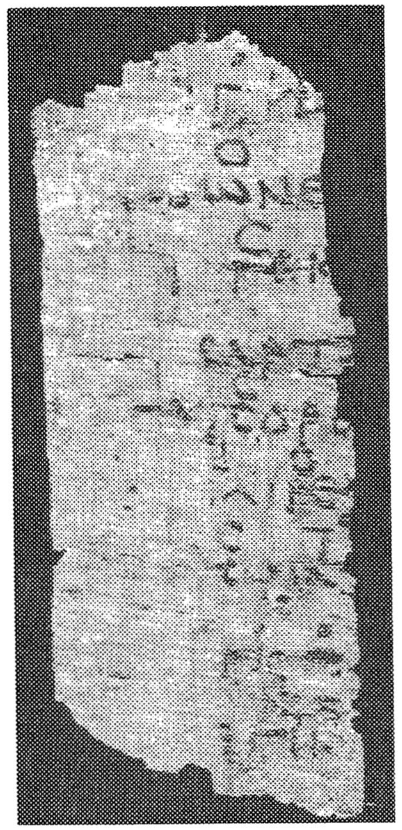

FIG. 8: Pap. Vienna G 29825 c

I [
1 :Γ̇ υο[

$\overset{\lrcorner}{\text{O}}$ [
2 ·−∪ ωνε[

C [
3 τεκ[

[
4 ωρτο̣[

C [
5 ——\ πορω̣[

I O [
6 :αιρε[

C ˙L [
7 ηφιλ[

[
8 τιc Γ̇[

$\overline{\text{N O}}$[
9 ⁝γιν[

Notation 1 : Γ̇ like the Γ̇ in 8, Hunger (1962), 59, but see Kannicht below 8 Γ̇ Hunger (1962), 59, Pöhlmann, Γ̣ Pöhlmann (1970), 91 9 O Pöhlmann, Ọ Hunger (1962), 59, Θ not possible in Hypolydian.

Text 1 υ̣ο̣, not ψ̣ο̣ Hunger (1962), 59: υο Pöhlmann, γυῶ̣[ν Kannicht (1981), 266: not possible, cf. notation lines 1, 8 and no. 14. 4 3 τεκ Hunger (1962), 59, Pöhlmann, τεν Kannicht (1981), 266 4 ωρτο̣ Kannicht (1981), 266, Pöhlmann, ωρτ̣ Hunger (1962), 59 5 ω̣ or ο̣ Kannicht (1981), 266 6 α or ζ Hunger (1962), 59, α Kannicht (1981), 266, Pöhlmann.

This fragment is the closest to the *Orestes* piece in the character of its script, and is likewise to be dated to about 200 BC.[1] The left margin is preserved, with at lines 2 and 5 symbols resembling an obelos but having some attachment at the inner extremity. Besides the vocal notes C O N I (*a b c#′ d′*) there are instrumental notes with arsis points: Γ (*e*) at 1 and 8 in the text, and Z (*g′*) at 7 between vocal notes, as in the *Orestes* fragment, and with the same shape as there, ˙L. In 2 the note O is clearly surmounted by $\lrcorner$, the triseme symbol otherwise first attested in the Seikilos song (no. 23). Above N O in 9 runs a long horizontal stroke (diseme). The dicolon or double point (:) appears at the beginnings of 1 and 6, and a triple point (⁝) before 9; their function is obscure.[2] The last revision of the text is due to R. Kannicht.[3] Nothing can be seen of its subject matter. Its significance lies in the variety of its notation, with the marginal symbols, double and triple points, and diseme and triseme signs. The melodic notation is all consistent with Hypolydian, mostly diatonic but modulating into chromatic with the N in 9 .

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[1] Hunger (1962), 55; see fig. 8.

[2] On their use in literary texts cf. Turner (1987), 7–9; on the dicolon as a rhythmical sign preceding notes cf. West 2 (1992), 267.

[3] Kannicht (1981), 266 (F 679. 23–31).

Nos. 12–14 PAP. VIENNA 29825 d–f Third–second century BC

No. 12

] ?[
1] . . [

]P [
2]τα . [

] [
3] . . . . . [

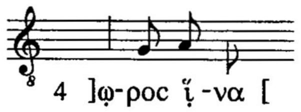
]?̄ Φ C ? [
4]ω̣ροcι̣να[

] I [
5]νcπιλα[

] Z ? [
6] . λινω̣δ̣[

[ ]
7] . [

No. 12



No. 14

] [
1]ρ̣ταιcδα[

] C [
2]κοιλο̣ι[

]Φ[
3 ε]φ̣ημερο̣[

] [
4]ο̣υcα⸖ Γ̇[

]C Z[
5] . ανη[

]Z E?[
6]ο̣cνα[

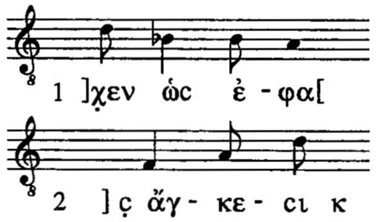
] C I [
7 [ ]

No. 13

]I P C[
1]χ̣ενωcεφα[

] R C I [
2]c̣αγκεcικ[

No. 13



Notation No. 12. 4 ? Pöhlmann Ọ Pöhlmann (1970), 92 6 ? Pöhlmann. No. 13. 2 R Pöhlmann (1970), 92, ꟼ pap. No. 14. 4 Γ̇ Pöhlmann (1970), 92, γ Kannicht (1981), 266, but see the *stigme* on Γ̇ and the note Γ̇ in no. 11. 1, 8 6 ? Pöhlmann.

Text No. 12. 4 ω̣ροc West, Pöhlmann, α̣ροc Pöhlmann (1970), 92, ε̣ροc Kannicht (1981), 266, but see the *disemos* 5 κυανέαι]ν cπιλά[δοιν (Soph. *Ant.* 966) Hunger (1962), 65, ἐ]ν cπιλά[δεccι Pöhlmann (1970), 92 6 .λινω̣δ̣ Pöhlmann, λ̣ινω̣λ̣ West, -λ̣ιν ε̣δ̣- Kannicht (1981), 266, α̣ινε̣δ̣ Pöhlmann (1970), 92, α̣ινε̣δ̣ or λ̣ινε̣δ̣ Hunger (1962), 60. No. 13. 1]χ̣εν West, Pöhlmann,]cεν Hunger (1962), 60 φα[Pöhlmann, φα.[Hunger (1962), 60 2]c̣ Kannicht (1981), 266,] .ἄγκεcι Hunger (1962), 60, 65, cf. Eur. *Bacch.* 1051. No. 14. 1]ρ̣ Kannicht (1981), 266 2 λο̣ι Pöhlmann, λοι Hunger (1962), 60 3 ἐ]φημερο̣[Hunger (1962), 66, cf. Eur. *Heracl.* 866, ἐ]φ̣ Kannicht (1981), 266, West, Pöhlmann 4]ο̣ West, Pöhlmann,]ο Hunger (1962), 61 6]ο̣c West, Pöhlmann,]α̣c Hunger (1962), 61,] .c Kannicht (1981), 266.

Nos. 12–14 are palaeographically very similar, and like no. 11 are to be dated to around 200 BC. They also have features in common with the other Vienna fragments. The note R has the same unusual form ꟼ as in no. 9. As in the *Orestes* fragment (no. 3), epsilon has a square epigraphic form as a musical note (14. 6), but is rounded as a letter in the text. The diastole appears again, as in nos. 3 and 10, and it is followed by the same instrumental Γ with arsis-point that we have seen in no. 11. Repeated notes are not written out (13. 1). The diseme sign appears at 12. 4 over an unidentified note.

The few legible words are all found in tragedy.[1] All the vocal notes are Lydian (R Φ C P I Z E =*f g a b♭ d′e′f′*). The instrumental Γ (*e*) fits in with this. ἄγκεcι (13. 4) is set without regard to the accent, and so is ἵνα if rightly recognized at 12. 4.

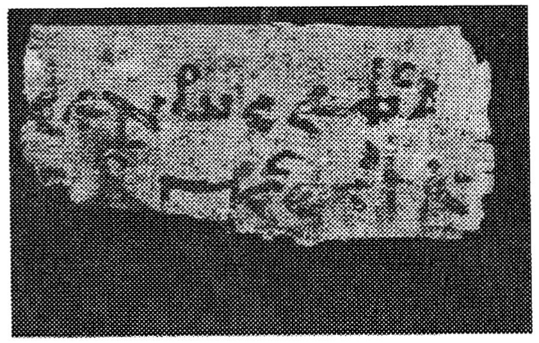


FIG. 10: Pap. Vienna G 29825 e

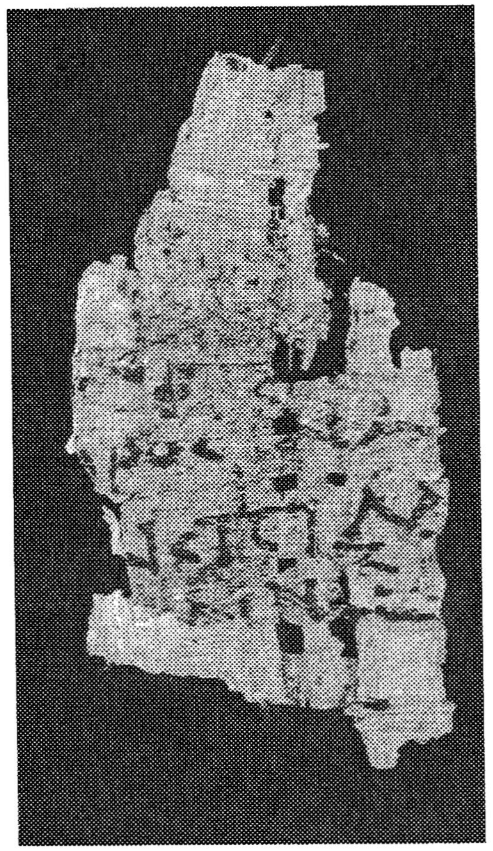


FIG. 9: Pap. Vienna G 29825 d

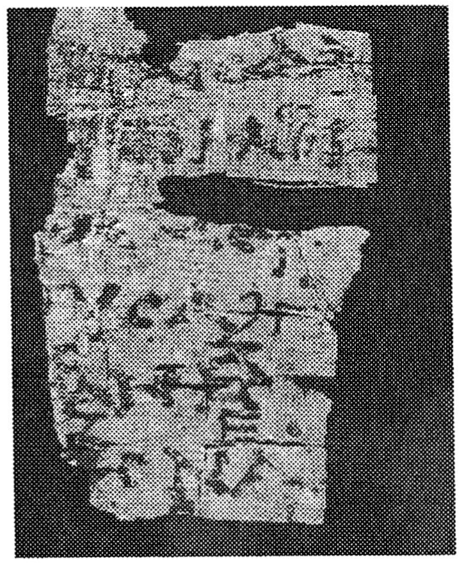


FIG. 11: Pap. Vienna G 29825 f

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[1] The fragments are edited by Kannicht (1981), 266 (F 679. 32–46); see figs. 9–11.

Nos. 15–16 PAP. VIENNA G 13763/1494 Third–second century BC

No. 15

  ]Φ̣ [
1]ταν τ̣α̣ .[

2]⊏⊔̇⊻KĊC⊻ [

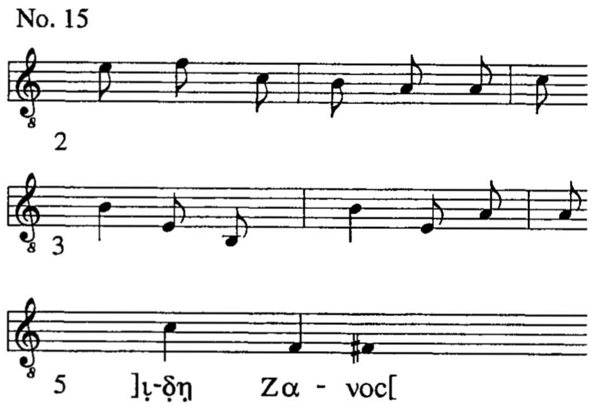
3]Ḳ̄ Γ̇hK̄Γ̇C C [

  ]N Ƶ N [
4] . . . . .ε̣οτ̣ι̣α̣[

  ] Ƶ̣ R‾∀ [
5]ι̣δ̣η̣ζανοc[

  ] Ȯ [
6]?̇? K . . cτ[

  ] ∀̇[
7]??? ⊢ ζ̣[



No. 16

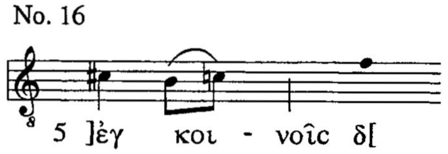
1] . ω . [

2]θ̣αcα̣ K̄[

3] < ? ⊏ [

4] ⊻̣ Γ [

  ]N O Ƶ̣ ? Ε̣[
5]εγ κοινοιc δ[



Notation No. 15. 3 Ḳ̄ Pöhlmann K̄ West, Pöhlmann 5 Ƶ̣ Pöhlmann, ⊻̣ or Δ̣ (Pöhlmann (1970), 93) not possible 6 K West, Pöhlmann. No. 16. 4 ⊻̣ West, Pöhlmann, not C (Pöhlmann (1970), 93).

Text No. 15. 7 ⊢ ζ̣[Pöhlmann, ⊢̄[.] . [Pöhlmann (1970), 93. No. 16. 5 νοιc : ο over ι in the pap.

Nos. 15 and 16, like the other Vienna fragments, belong to the period around 200 BC, even if some uncertainty remains owing to the small extent of the legible text.[1] No. 15 contains vocal music which is three times interrupted by instrumental sequences. After line 1 there are two lines of instrumental notes bearing disemes and arsis-points; in 4–5 there is more text with vocal notation; in 6 we appear to have the end of an instrumental sequence and, following two large dots which are perhaps equivalent to the diastole, the start of the next vocal section; and a similar arrangement is probably to be assumed for 7.

Vocal and instrumental parts alternate similarly in no. 16, which has a later cursive non-musical text on its verso. In 1–2 we can discern the end of a vocal section; then, after a wide gap, stands a note K with diseme above, and instrumental notation continues in 3–4. In 5 there is more text with vocal notation. On κοι- there is a melisma.

The notation in both fragments is Hypolydian, diatonic in the instrumental parts, chromatic in the vocal. The notes preserved are: instrumental h ⊢ Γ C K ⊻ < ⊏ ⊔ (*B d e a b c′ d′ e′ f′*); vocal R ∀ C O Ƶ N E (*f f# a b c′ c#′ f′*), with an uncertain diatonic Φ (*g*) at the beginning of no. 15.

It may be that both fragments belong to the same piece, but no physical connection can be established. They are of interest for their combination of vocal with instrumental music, their rhythmical notation, and their use of the notes R (also in nos. 9 and 13) and ∀, whose existence by the late third century BC is of significance for the history of the development of the Greek vocal notation.[2]

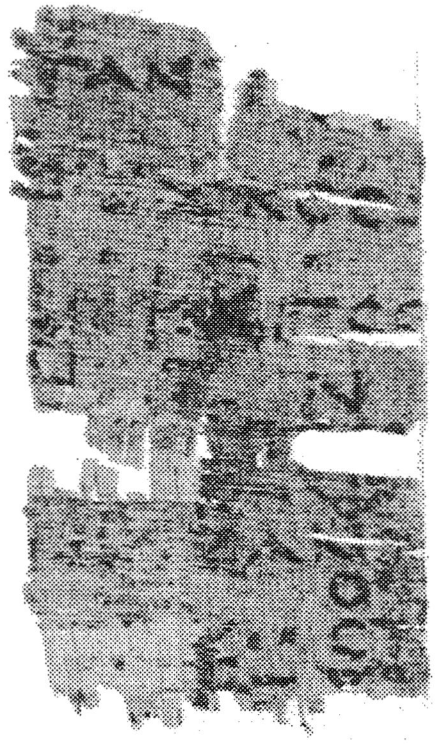


FIG. 12: Pap. Vienna G 13763

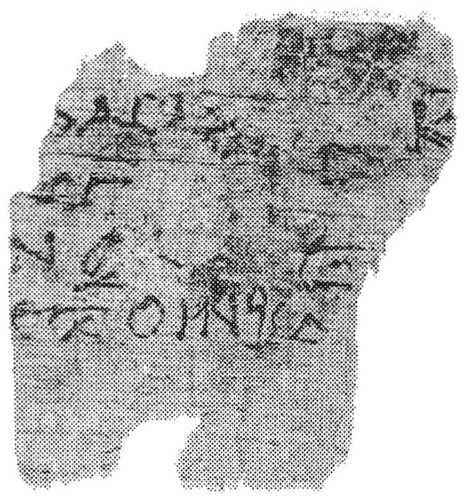


FIG. 13: Pap. Vienna G 1494

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[1] H. Hunger (personal communication); cf. Pöhlmann 2 (1966), 501; see figs. 12 and 13.

[2] See Pöhlmann (1976), 64; West 2 (1992), 259 f.

Nos. 17–18 PAP. BERLIN 6870 lines 16–19; 23 Second–third century AD

No. 17

[ ]
I′ İ′ Ȯ′ K′ K′ Ȯ′ :I′ ∩ O′ K̇′ İ′ [
16 ΑΥ ΤΟ ΦΟ ΝΩ ΧΕ ΡΙ ΚΑΙ ΦΑ CΓΑ ΝΟΝ ị[

A′ İ′ I′ İ′ Ȯ′ ⟦B⟧ K′ O′ İ′ :I′K′ ∩ İ′ E′ [
17 Τ̣Ε̣ Λ Ὰ ΜΩ ΝΙ Α ΔΑ ΤΟ CΟΝ ΑΙ ⟦Ι⟧ ΑΝ Ε[

K′ K̇′ I′ ∩ O′ Ȯ′ Ȧ′ Ė′ I′ Ȯ′ K̇′ ? [
18 ΔΙ Ο̣ ΔΥ CΕ Α ΤΟΝ Α ΛΙ ΤΡΟΝ Ο Τ̣ Ρ̣ . [

I′ K′ Ė′ I′ K̇′ :K̄′ O′ ⟦∩̣̇′⟧ I′ Ė′ Ā′ [
19 Ε̣Λ Κ Ε̣ CΙΝ Ο ΠΟ ΘΟΥ ΜΕ ΝΟC [

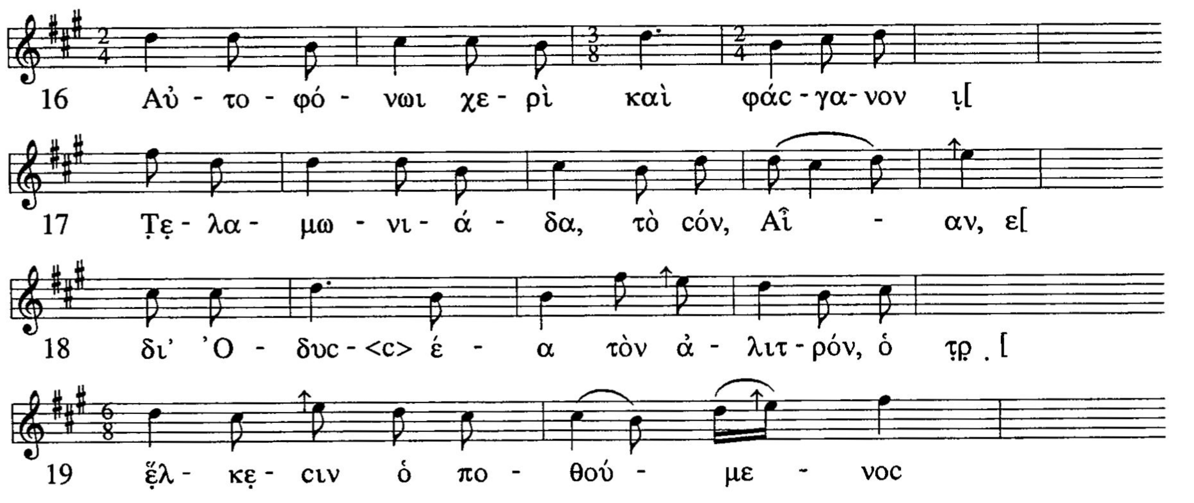
[ ]
Notation 16 : I′ ∩ pap., I′ ∩̇ supplied by Wagner (1921), 261, I′ ∩̄̇ by Pöhlmann (1970), 100 17 Β̣ that is ⟦B⟧ Schubart (1918), 766, 768, West 1 (1992), 13, ⟦K⟧ Wagner (1921), 261, Pöhlmann (1970), 100 18 I′ ∩ Schubart (1918), 768, West 1 (1992), 13, 14, I′ ∩̇ Pöhlmann (1970), 100 Ȧ′ Ė′ I′ West 1 (1992), 13, Pöhlmann (1970), 100, Ȧ′ Ė′ ? Schubart (1918), 766, 768, A′ Ė′ Ị′ Wagner (1921), 261 19 :K̄′ Wagner (1921), 262, .K̄′ Schubart (1918), 768 ⟦∩̣̇′⟧ I′ West 1 (1992), 13, 14, ⟦A′⟧ ⟦I′⟧ Wagner (1921), 262 Ā′ West 1 (1992), 13, A′ Schubart (1918), 768.

No. 18

T Y ∩̇ Ṫ K̇ I O T Ḳ̇ A′ Ḳ̇[
23 ΑΙ ΜΑΚΑ ΤΑ ΧΘΟΝΟC ΑΠΟ [

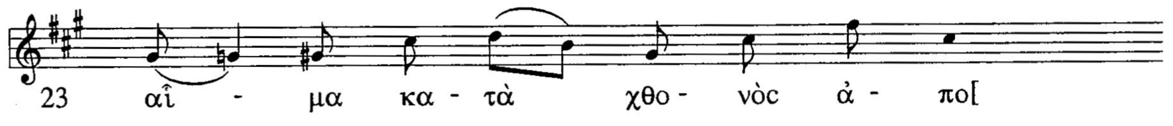
Notation 23 T Y ∩̇ Schubart (1918), 766, 768, West 1 (1992), 13, 14, : Ī X ∩̇ Pöhlmann (1970), 100, 103, T X ∩̇ Wagner (1921), 262 Ḳ̇ A′ Ḳ̇ [Pöhlmann, Ḳ A′ Ḳ [′ West 1 (1992), 13, 14, Ẏ A′ ? Schubart (1918), 766, 768, Ḳ̇ or Χ̣, Α̣′ or Χ̣, Ṭ̇ Wagner (1921), 262.

No. 17


16 Αὐ - το - φό - νωι χε - ρὶ καὶ φάς - γα - νον ι̣[
17 Τε̣ - λα - μω - νι - ά - δα, τὸ cόν, Αἶ - αν, ε[
18 δι' 'Ο - δυc - <c> έ - α τὸν ἀ - λιτ - ρόν, ὁ τρ̣ . [
19 ἕ̣λ - κε̣ - cιν ὁ πο - θοῦ - με - νος

Λ′
Text 16 left margin ΑΛ : Ẋ that is ἄλλ(ο) χ(οροῦ) ι̣[Schubart (1918), 768, West 1 (1992), 13, γ̣[Kannicht (1981), 275 17 ⟦Ι⟧ Schubart (1918), 766, 768, Ι Pöhlmann (1970), 100 18 [᾿Ο]δυc<c>έα Schubart (1918), 766, 768, υ̣cεα West 1 (1992), 13 τ̣ρ̣ . West 1 (1992), 13, ζ̣η̣ Schubart (1918), 766, Kannicht (1981), 276, τ̣η̣ Pöhlmann (1970), 100.

No. 18



Text 23 left margin (cf. 16) on the level of the notation].α′ [. . .] α̇′ Pöhlmann,].α′ Ȧ′ West 1 (1992), 13, ἄλ(λο) Ȧ′ Schubart (1918), 766, that is ἄλ(λο) ⟦α′⟧ Pöhlmann (1970), 100.

Pap. Berlin 6870, published by W. Schubart in 1918, preserves, on the verso of a military document dated to 156 AD, the left half of a column containing five musical items.[1] Lines 1–12 are from a paean (no. 50), of which the first line is marked by a paragraphos and ἔκθεϲιϲ. Lines 13–15, which begin further to the right, are an instrumental piece (no. 51). Lines 16–19 are from an Ajax-tragedy (no. 17), introduced by the marginal note αλλ(ο) χ(ορου), similar to those found in nos. 9 and 25. Lines 20–2 are a second instrumental piece, again indented (no. 52). In the left-hand margin of line 23 there stands another note α(λλο), followed by a single line of tragedy, the last on the sheet. The left, upper, and lower margins of the papyrus are preserved. In no. 50 the length of the lines can be approximately established,[2] and it indicates that the width of the original sheet was at least twice as great as the preserved portion. The format shows that we have to do with a collection of musical examples, which share the same highly developed rhythmical notation.[3]

Schubart left the musical notation for others to analyse, but provided a transcript and a facsimile, which served subsequent students well.[4] R. Wagner checked readings on the original with Schubart's help, making a decisive advance in the interpretation of the notation.[5] C. Del Grande and G. B. Pighi contributed further proposals for supplementing the text.[6] E. Heitsch edited the paean without the musical notation but with a full synopsis of the conjectural supplements.[7] The papyrus disappeared with the whole Berlin collection at the end of the Second World War, but eventually came to light again, and R. Kannicht was able to recollate it for the text of the two tragic fragments.[8] A small additional fragment (inv. 14097) was joined on at the top right-hand corner and, following a re-examination of the papyrus by Stephanie West, published.[9]

No. 17 may be assigned to a tragedy of the Classical or early Hellenistic period on the basis of its content (lyric dialogue of Tecmessa and female Chorus about Ajax's suicide), its metre (dactylo-epitrite), and its musical setting (largely contrary to the word accents), which points strongly to strophic composition.[10] This last feature is against the proposal of Del Grande to ascribe no. 17 to Timotheos' *Ajax* dithyramb, of which nothing is known but the title,[11] but which will have been astrophic.[12] Nor can F. M. Heichelheim's ascription to the Ὅπλων κρίϲιϲ of Aeschylus be upheld.[13] There is nothing to connect no. 17/18 with the other Ajax tragedies of Aeschylus (Θρῇϲϲαι, Cαλαμίνιαι),[14] or with those of Astydamas II, Carcinus, or Theodectes.[15] Kannicht rightly placed them among the Tragic Adespota.[16]

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[1] Schubart (1918).
[2] See pp. 168 f.
[3] Schubart (1918), 764.
[4] Reinach (1919); Thierfelder (1918); (1919); Schröder (1920); Romagnoli (1920).
[5] Wagner (1921); cf. Schröder (1922).
[6] Del Grande (1931); Pighi (1943).
[7] Heitsch (1961), 168–70.
[8] Kannicht (1981), F 683.
[9] West 1 (1992), 12–14 and pl. 1.
[10] West 2 (1992), 197, 282, 320–1, with pl. 35.
[11] Del Grande (1946), 89 f., and again Bélis (1998). Cf. Wilamowitz (1903), 106.
[12] West 2 (1992), 361–4.
[13] Heichelheim (1958); Pöhlmann (1970), 101.
[14] Aeschylus, Ὅπλων κρίϲιϲ: *TrGF* III F 174–8; Θρῇϲϲαι: *TrGF* III F 83–5; Cαλαμίνιαι: *TrGF* III F 216–20.
[15] Astydamas II: *TrGF* I 60 F 1 a; Carcinus: *TrGF* I 70 F 1 a; Theodectes: *TrGF* I 72 F 1.
[16] See above, n. 8.

Provenance from a strophic composition might be assumed too for no. 18, whether or not it belonged to the same play. These two fragments are accordingly placed here, whereas the other items on the Berlin papyrus (nos. 50–2) would seem to belong to the Imperial period and appear later in the volume.

The setting of no. 17 lies in the soprano register. The note symbols, O′ K′ I′ E′ A′, are all furnished with the octave stroke. Except for the E′, they belong in the top octave of the Hyperaeolian scale. The note E = *f* ′ occurs in Hyperionic, Hypolydian, and Lydian, but none of the standard scales has E′ = *f* ′′. O. J. Gombosi wanted to explain it away as a mistake for H′ = *e♭*′′, but Wagner rightly rejected this on palaeographical grounds.[1] One might consider the possibility that the copyist of the Berlin papyrus added the octave strokes to the notes on his own initiative, to give the excerpt more explicitly the character of a women's chorus: without the octave strokes, the notes could be combined with the likewise Hyperaeolian notes of no. 18 (only one of which has an octave stroke, apparently an error[2]) to yield the series X? T O K I E A. (Instead of X an exharmonic Y = *g* is also possible.) But the E remains anomalous; we should expect X T (C) O K I Z A = *f# g# a b c#′d′e′f#′*. Evidently this music used a special modal scale in which the seventh degree was sharpened. Had it been raised by a whole semitone, we should have expected the note-symbol Δ to have been used according to normal principles of notation.[3] The choice of E suggests that it was raised only by a quarter-tone.

As to the high register, it can hardly reflect the original tragic performance, in which all female parts would have been played by male actors. What we have before us must be a later arrangement for concert performance by a female singer (a chorus is harder to envisage). She presumably assumed the persona of Tecmessa, even if the (strophic) original was choral.

The rhythmical notation does not follow the system used in the Paean and the instrumental fragments (nos. 50–2). With one exception (line 19), the long syllables do not carry diseme signs, the time-value of the notes being given by the syllabic quantities. If a leimma is added to a long syllable, the result is a superlong. The hyphen appears only once in the notation, line 17, though it occurs twice in the text (lines 18, 23), where its function is unclear.

The pointing in no. 17 is generally consistent with the apparent dactylo-epitrite character of the metre. The dactyls are notated -⏑̇⏑̇ or -⏑⏑̇. Line 16 begins with a D-colon, apparently followed by another. To regularize the rhythm the last syllable of the first D-colon is prolonged by means of a leimma; unfortunately the papyrus is damaged above the leimma, and it is not possible to be sure whether it carried a diseme sign with arsis-point. In line 17 there was probably period-end after Αἶαν, the first syllable of which is extended to double length, equivalent to a whole dactyl, with a melisma.[4] In line 18 we probably have the end of one D-colon, -⏑⏑- δι' Ὀδυϲ-, a short link-syllable, and then another D-colon. Here again superlength is used to equalize the rhythm, the leimma over the second syllable of Ὀδυϲ<ϲ>έα serving to scan -δυϲϲέ- as ⌊⏑, equivalent to the dactyls. (We must suppose that in the two notes over -ϲέᾱ the arsis-point has erroneously been applied to the second O′ instead of to the first.)

In line 19 and no. 18 R. P. Winnington-Ingram saw that the pointing of the groups -⏑⏑̇⏑⏑̇ (ἕλκεϲιν ὁ πο- and -τα χθονὸϲ ἀπο[) has an analogy in no. 23, the song of Seikilos, where the iambic metra are pointed ⏑-⏑̇⏑̇⏑̇. These are therefore trochaic metra, in which the first half is reckoned as the thesis and the second half as the arsis.[1] Only the beginning of line 23 (no. 18) is anomalous, for to go by the notation, αἶμα κα– occupies only five time-units, T Y in the thesis and ∩ T K (with stigmai) in the arsis. There is no sign that a note or diseme sign has been lost. E. Pöhlmann (1970) attempted to resolve the difficulty by reading Ī for the first T. But T seems to be what the papyrus has,[2] so that this solution remains a conjectural emendation.

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[1] Gombosi (1939), 134 f.; Wagner (1955), 115.
[2] West 2 (1992), 322.
[3] Cf. West 2 (1992), 255–8.
[4] For similar treatment of mythological names in other papyri (nos. 39 and 53) see West 2 (1992), 203.

Melody and rhythmization link no. 18 with no. 17, though the connection seems to be contradicted by the marginal sign at line 23, α[. . .] ⟦α′⟧, which Schubart interpreted as ἄλ(λο) A′ (*f#′′*).[3] H. Abert supposed that the second A′ indicated the transposition of the whole line into the higher octave.[4] Wagner took it as an indication of key, and Gombosi as a duplication of the ἄλλο.[5] But the difficulty of an ἄλλο here was recognized by Pighi. This is the last line on the verso of a single sheet of papyrus: hardly the place for a new excerpt to begin.[6] The decisive point is that the two A's are set somewhat above the level of the musical notation. They belong, therefore, neither to the notation nor to the text. This leads us to return to Schubart's interpretation and to read an ἄλλο followed by a cancelled A, this being not a note but the initial letter of the line of text, which the scribe had put too high. The purpose of the ἄλλο was simply to separate no. 18 from no. 52, in the same way as no. 51 is marked off by an ἄλλο from no. 17. So far as the page layout goes, there is no objection to taking no. 18 as an addendum to no. 17.

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[1] Winnington-Ingram (1955), 80.

[2] West 1 (1992), 14, following Stephanie West's re-examination of the original.

[3] Schubart (1918), 764, 768.

[4] Abert (1919), 325.

[5] Wagner (1955), 115; Gombosi (1939), 135.

[6] Pighi (1943), 225 f., 242 pl.

No. 19 EPIDAURUS , *SEG* 30. 390 (Hymn to Asclepius) Hellenistic?

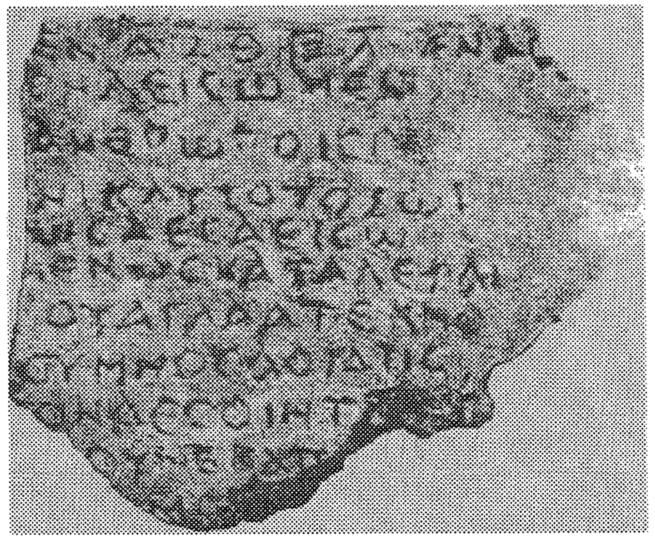
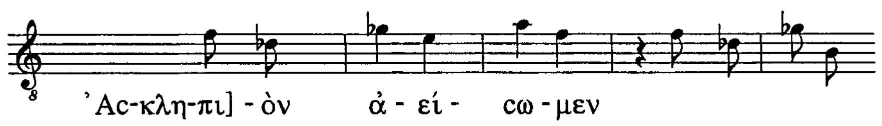


FIG. 14: Hymn to Asclepius

]ẸN Δ̄Ζ̄Θ̄Ε̄ Λ̄ ENΔỌ[
1]ον ἀείcωμεν
2] ἀνθρώποιcιν
3 ᾿Απόλλω]νι κλυτοτόξωι
4]ωc δέ c᾿ ἀείcω
5 ἐπιcτα]μένωc καταλέξαι
6]ịου ἀγλαὰ τέκνα
7]c ὕμνοc ἀοιδῆc
8]τ̣ον δέ cοι ἦτ[ορ
9]οὔνεκα π[
10]μο[

Notation Δ̄ West (1986), 41, Ā lapis Θ̄ Solomon (1985), 170, Θ̄ lapis Ọ [West (1986), 41, Ẹ [Mitsos (1980), 214.

Text 1 θε]ὸν Mitsos (1980), 212, ᾿Αcκληπι]ὸν West (1986), 40 3, 5 suppl. Mitsos (1980), 212.



This fragment of a hymn was discovered in the precinct of Asclepius at Epidaurus in 1977 and published by M. T. Mitsos.[1] S. Bonefas has argued that it is part of the same inscription as *IG* 4^2(1). 135. It was inscribed in the late third century AD, but as with other verse inscriptions from the site, the composition may be several centuries older; the notes appear to come from a chromatic scale, which is a pointer to a Hellenistic rather than a later date.

The hymn was clearly in hexameters. The fact that musical notation appears only over the first line suggests that the same melody served for every line, possibly a traditional procedure in singing hexameters.[2] After the notes for the last two feet of the verse comes a Λ̄, which must be taken as a diseme leimma, not a note, and then (at least) four more notes, which may represent a figure played on the accompanying instrument before the next line was sung.

With the two small emendations adopted, the notes fit neatly into two conjunct chromatic tetrachords, from Hypate to Nete synemmenon in the Hyperionian scale.

---

[1] Mitsos (1980), cf. *SEG* 30, 1980, no. 390; Solomon (1985); West (1986); Bonefas (1989); Wagman (1994), 3 fr A, 226.

[2] Cf. West (1986), 43 f.

No. 20 DELPHI INV. 517, 526, 494, 499 (Paean of Athenaios) 128/7 BC

Col. i/ii [. . . . .]ειcτονθεονοε[. . . . . . | . .]ηναιοc

Col. i

[ ]Μ Ι Μ Υ Μ
1 [. . . . .]ῳωναβαθυδενδροναιλα

[ ] Θ Ι Μ Ι Μ Υ Μ [ ]
2 [. . . . . . .]cε[. .]βρομουουθυγατρεcευωλ[. . . .]

Θ ! [ ] Θ Ι Μ Ι Μ Υ Μ Υ
3 μολετεcυνομαιμονιναφοιοιβονωιδαε[.]

Μ F Φ Υ F Θ Ʊ ⋔ Ʊ
4 cιμελψητεχρυcεοκομανοcαναδικορυν

Θ Ʊ Θ [ ] Μ Θ Ι Μ Υ [ ]
5 βαπαρναccιδοcταacδεπετεραcεδραναμ[.]

Υ Μ ΥΜ Ι Θ Ι Θ Γ Ʊ ⋔ Γ
6 γακλυταιειcδεελφιcιινκαcταλιδοc

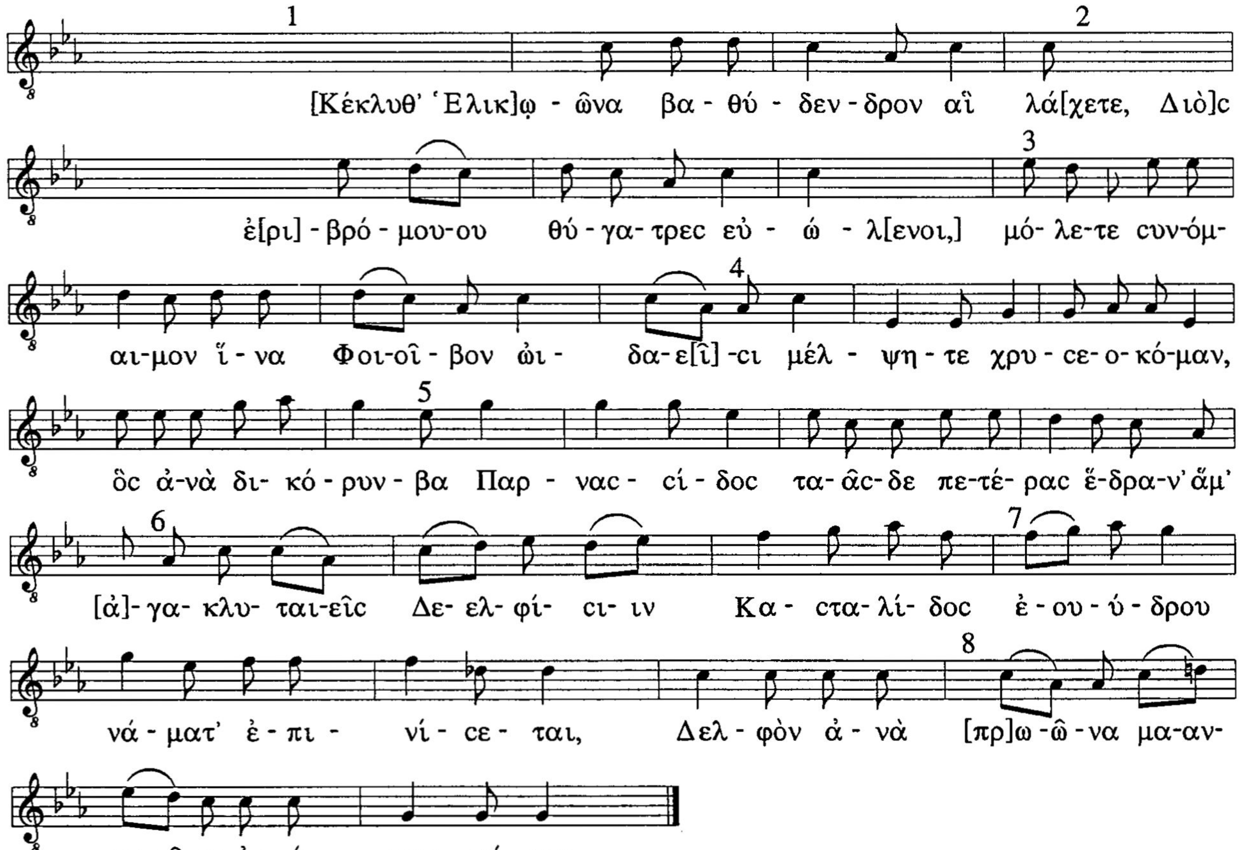
Ʊ⋔ Ʊ Θ Γ Λ Μ
7 εουυδρουναματεπινιcεταιδελφοναvα

Υ Μ Ι Θ ΙΜ Φ
8 [. .]ωωναμααντειειονεφεπωνπαγον

Notation 1]Μ on the photo and squeeze: Bélis (1992), 55, 58, pl. V 1–2,]Θ̣ Reinach (1909–13), 154 3 !̣ West, ? Pöhlmann (1970), 58, Bélis (1992), 55, 59 5 [ ] Μ lapis, ! Μ Bélis (1992), 60, supposing that Ι belongs to the second syllable of ταac Μ and Θ above δε and τε lapis, shifted back to αc and πε by West (1968), 176.

Col. i/ii [Παιὰν καὶ ὑπόρχημα] εἰc τὸν Θεὸν ὃ ἐ[πόηcεν | ᾿Αθ]ήναιοc.

Col. i


1
2
[Κέκλυθ᾿ ῾Ελικ]ῳ - ῶνα βα - θύ - δεν - δρον αἳ λά[χετε, Διὸ]c
3
ἐ[ρι] - βρό - μου-ου θύ - γα- τρεc εὐ - ώ - λ[ενοι,] μό- λε-τε cυν-όμ-
4
αι-μον ἵ - να Φοι-οῖ - βον ᾠι - δα- ε[ῖ] -cι μέλ - ψη - τε χρυ - cε- ο- κό-μαν,
5
ὃc ἀ-νὰ δι- κό - ρυν - βα Παρ - ναc- cί - δοc τα- ᾶc-δε πε-τέ- ραc ἕ-δρα-ν᾿ἅμ᾿
6
7
[ἀ]- γα- κλυ- ται-εῖc Δε- ελ- φί- cι- ιν Κα - cτα- λί- δοc ἐ - ου - ύ - δρου
8
νά - ματ᾿ ἐ - πι - νί - cε - ται, Δελ - φὸν ἀ - νὰ [πρ]ω -ῶ -να μα-αν-
τει-εῖ-ον ἐφ - έ - πων πά -γον.

Text Title: [Παιὰν καὶ ὑπόρχημα] Pöhlmann (1970), 58 ὃ ἐ[πόηcεν |᾿Αθ]ήναιοc (᾿Αθηναίου) Bélis (1992), 53 f.

Supplements to 2–24: Weil (1893), 574–77, (1894), 361 and Reinach (1909–13), 152 f., supplements to 23–6: Crusius (1894), 33.

1 [Κέκλυθ᾿ ῾Ελικ]ῶνα Crusius (1894), 40 f., ῾Ελι]κ̣ῶνα Pöhlmann (1970), 58, [Πρόμολεθ᾿ ῾Ελικ]ῶνα West 1 (1992), 6, ῾Ελικ]ῳ̣ῶνα Bélis (1992), 58 2 Διὸc] ἐ[ρι]- Reinach (1909–13), 152, Διὸ]c ἐ[ρι]- Bélis (1992), 55, 58.

[ ]   Γ   Ʊ Φ Ʊ   [ ]
9 [. .]κλυταμεγαλοπολιcαθθιcευχαιεị

[ ]Ḳ Λ Μ   Ο   Κ Λ Κ Γ   Ʊ Φ Ʊ   [ ]
10 [.]cιφεροπ λοιοναιουcατριτωωνιδοcδα[. .]

Θ Γ Μ   Γ Β Γ Λ Κ Γ Ο Μ Γ
11 δοναθραυcτοναγιοιcδεβωμοιοιcινα

Κ Μ Λ Κ Λ   Μ   Λ Μ Ο   Κ
12 φαιcτοcαιειθε<ι>νεωνμηραταουρωνομου

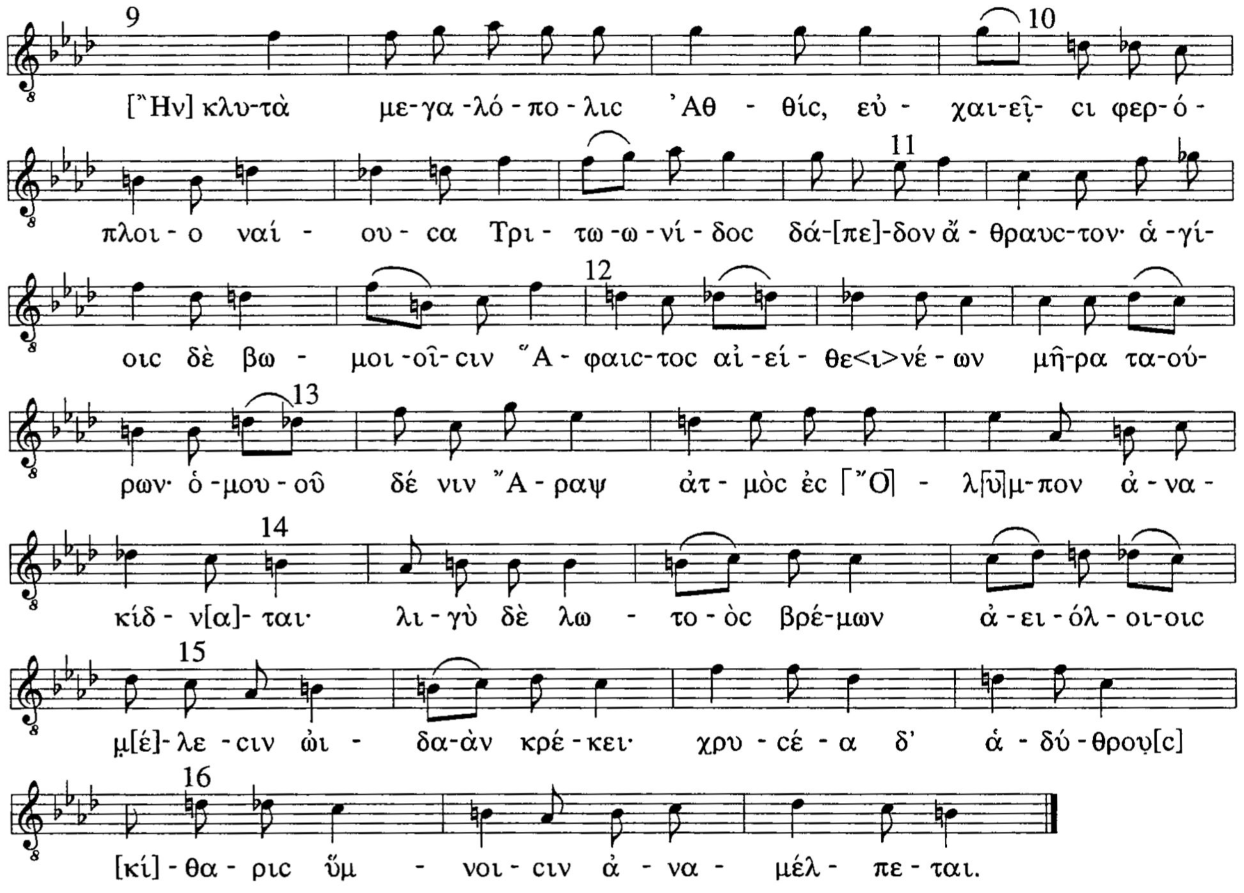
Λ Γ Μ Ʊ Θ Ι Θ Γ   Θ Υ Ο Μ Λ Μ
13 ουδενιναραψατμοcεc⌈ο⌉λ⌈υ⌉μποναν ακιδν[.]

Ο Υ Ο   Μ Λ   Μ Λ Κ Λ Μ Λ
14 ταιλιγυδελωτοοcβρεμωναειολοιοιcμ̣[.]

Μ Υ Ο Μ   Λ Μ   Γ Λ Κ Γ Μ [ ]
15 λεcινωιδααν κρεκειχρυcεαδαδυθρου̣[. . .]

Κ Λ Μ Ο   Υ Ο Μ Λ Μ Ο Φ Ʊ[   ]
16 θαριcυμνοιcινα ναμελπεταιοδε[. . . . .]

Notation 9 [ ] above ị, [Θ] Reinach (1909–13), 157, [Γ] Bélis (1992), 64 10 Ḳ or Ṃ West, Ḳ or ! Reinach (1909–13), 154, Bélis (1992), 55, 65 11 Ο lapis, Θ Jan (1899), 15 12 Λ above -θε<ι> lapis, omitted by Bélis (1992), 64 14 last Λ Bélis (1992), 66, on the squeeze and an old photo, Λ̣ Pöhlmann (1970), 60 15 Above [. . .] [Γ] Reinach (1909–13), 157 16 Κ lapis, Bélis (1992), 64, Γ erroneously Bélis (1992), 55.


9
10
[῏Ην] κλυ-τὰ με-γα -λό - πο - λις ᾿Αθ - θίς, εὐ - χαι-εῖ- cι φερ-ό -
11
πλοι - ο ναί - ου - cα Τρι - τω -ω - νί - δος δά-[πε]-δον ἄ - θραυc-τον· ἁ -γί-
12
οις δὲ βω - μοι -οῖ- cιν ῞Α - φαιc-τοc αἰ -εί - θε<ι>νέ - ων μῆ-ρα τα-ού-
13
ρων· ὁ -μου - οῦ δέ νιν ῎Α - ραψ ἀτ - μὸς ἐς ⌈῎Ο⌉ - λ⌈ύ⌉μ-πον ἀ - να -
14
κίδ - ν[α]- ται· λι - γὺ δὲ λω - το - ὸς βρέ-μων ἀ - ει - όλ - οι-οις
15
μ[έ]- λε - cιν ᾠι - δα-ὰν κρέ - κει· χρυ - cέ - α δ' ἁ - δύ - θρου[c]
16
[κί] - θα - ρις ὕμ - νοι - cιν ἀ - να - μέλ - πε - ται.

Text 9–10 εὐχαιε | [ῖc]ị Weil (1893), 576, εὐχαιεῖ̣ | [c]cι Reinach (1909–13), 154: ‘par inadvertance’, Bélis (1992), 65 12 αιειθε lapis, αἰείθε<ι> Weil (1893), 576 13 ⌈῎Ο⌉ λ ⌈υ⌉ μπον Weil (1893), 578, υλομπον lapis 16–17 [θ] | [ε]ω[ρ]ῶν Weil (1893), 577, τ̣[εχνι] | [τ]ωῶν Weil (1894), 361 comparing no. 21. 20–1, [τεχνι] | [τ]ωῶν Reinach (1909–13), 152, [τεχνι] | τ̣ωῶν Pöhlmann (1970), 60, [τεχνι] | τωῶν Belis (1992), 73.

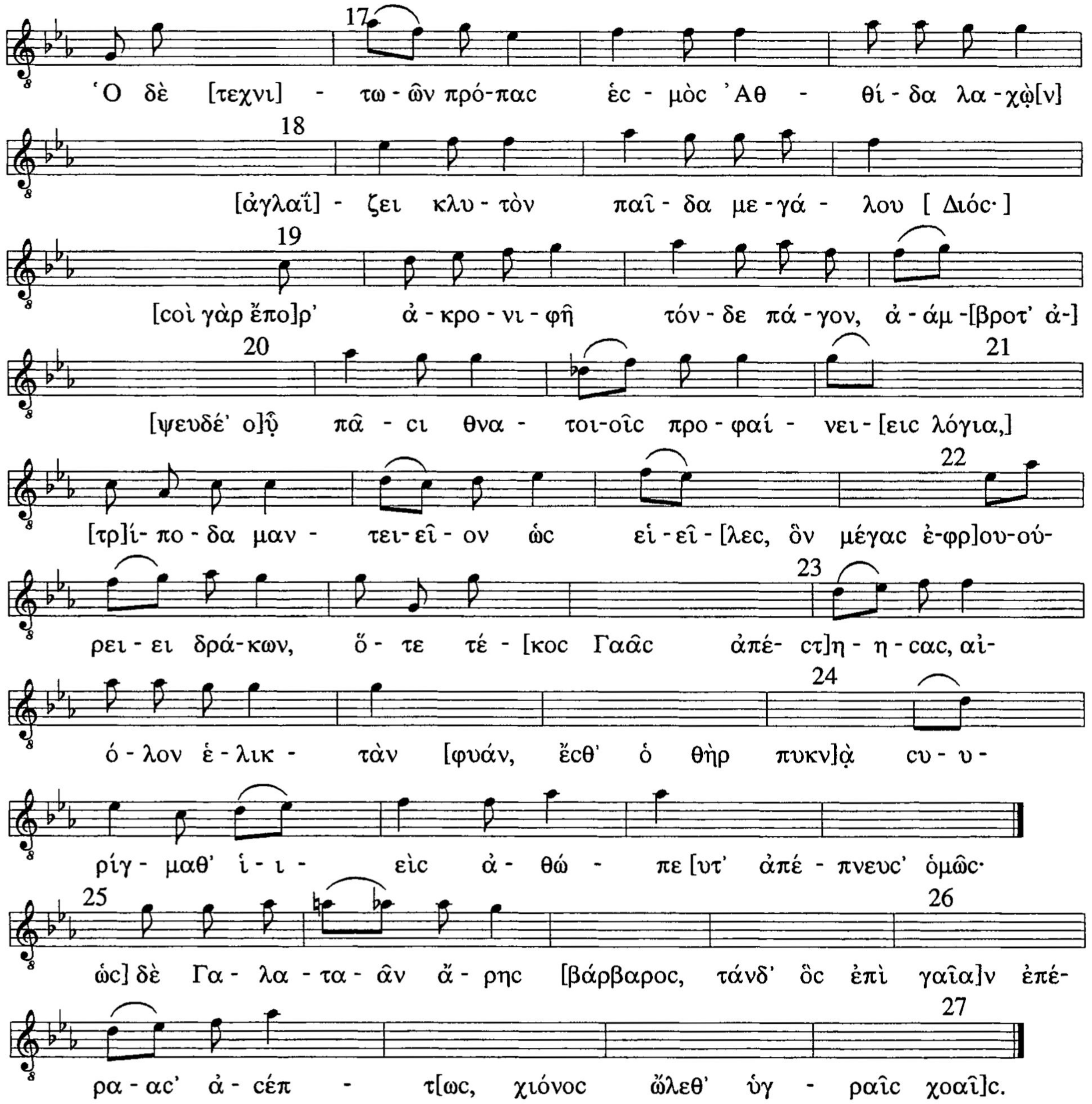
```
     ⋔ Γ   Ʊ Θ Γ         ⋔   Ʊ   [     ]
17   τωωνπροπαcεcμοcαθθιδαλαχῳ[.....]
```

Col. ii

```
     [ ] Θ   Γ       ⋔ Ʊ    ⋔ Γ [            ]
18   [.]ζ̣εικλυτονπαιδαμεγαλου[.............]

      Ṃ  Ι   Θ Γ  Ʊ ⋔  Ʊ ⋔  Γ   Ʊ [          ]
19   [..]ρακρονιφητονδεπαγοναaμ[..........]

     [  ] ⋔  Ʊ     Λ Γ    Ʊ      Γ [      ]
20   [.]ῠπαcιθνατοιοιcπροφαινει[.......]

      Μ   Υ Μ        Ι  Μ  ΙΘ  Γ  Θ[          ]
21   [...]ιποδαμαντειειονωcειει[...........]

     [  ] Θ̣  ⋔ Γ Ʊ ⋔   Ʊ   Φ   Ʊ[           ]
22   [..]ουουρειειδρακωνοτετε[...........]

         Ι Ο Γ   ⋔    Ʊ        [          ]
23   [.].ηηcαcαιολονελικταν[.............]

     [  ]  Ι  Θ  Μ Ι Θ  Γ   ⋔     [        ]
24   [.]α̣cυυριγμαθιιειcαθωπε[..............]

     [  ] Ʊ    ⋔  Ж ⋔   Ʊ [               ]
25   [..]δεγαλαταανα ρηc[.................]

     [  ]     Ι  Θ Γ ⋔  [                 ]
26   [.]νεπεραacαcεπτ[...................]
```

Notation 19 Ṃ Bélis (1992), 74 20 Λ lapis, Bélis (1992), 74, pl. VI 1–2, ⌈⋔⌉ Reinach (1909–13), 155, West 2 (1992), 291 22 Θ̣ Bélis (1992), 74 23 Ο lapis, ⊙ Jan (1895), 434, West 1 (1992), 7: the mason has accidentally put the missing dot into the first Ο of -ουου- (line 22).

Col. i/ii


17
Ὁ δὲ [τεχνι] - τω - ῶν πρό-πας ἑς - μὸς Ἀθ - θί - δα λα - χῷ[ν]
18
[ἀγλαΐ] - ζει κλυ - τὸν παῖ - δα με - γά - λου [Διός·]
19
[σοὶ γὰρ ἔπο]ρ' ἀ - κρο - νι - φῆ τόν - δε πά - γον, ἀ - άμ -[βροτ' ἀ-]
20
21
[ψευδέ' ο]ῦ πᾶ - σι θνα - τοι-οῖς προ - φαί - νει - [εις λόγια,]
22
[τρ]ί- πο - δα μαν - τει- εῖ - ον ὡς εἰ - εῖ - [λες, ὃν μέγας ἐ-φρ]ου-ού-
23
ρει - ει δρά-κων, ὅ - τε τέ - [κος Γαᾶς ἀπέ- στ]η - η - σας, αἰ-
24
ό - λον ἑ - λικ - τὰν [φυάν, ἔσθ' ὁ θὴρ πυκν]ὰ̣ συ - υ -
ρίγ - μαθ' ἰ - ι - εἰς ἀ - θῶ - πε [υτ' ἀπέ - πνευς' ὁμῶς·
25
26
ὡς] δὲ Γα - λα - τα - ᾶν ἄ - ρης [βάρβαρος, τάνδ' ὃς ἐπὶ γαῖα]ν ἐπέ-
27
ρα - ας' ἀ - σέπ - τ[ως, χιόνος ὤλεθ' ὑγ - ραῖς χοαῖ]ς.

Text 17 λαχ[ὼν] Reinach (1909–13), 152, λαχῷ[ν] Pöhlmann (1970), 60, Bélis (1992), 73 17–18 [κιθα|ρί]ς̣ει or]ζ̣ει Reinach (1909–13), 155, [ἀγλα|ΐ]ζ̣ει West 1 (1992), 6 f. 18 καυτον Reinach (1909–13), 155, κλυτὸν Colin (1909–13), 155, Bélis (1992), 74 18–19 [Διός· | σοὶ γὰρ ἔ|πο]ρ' West 1 (1992), 7, [Διὸς ὑμνοῦσί σε | πα]ρ' Reinach (1909–13), 152 20 [ο]ῦ̣ Bélis (1992), 56, 74, West 1 (1992), 7, [ὃ]ς̣ Pöhlmann (1970), 60, [ὃς] Reinach (1909–13), 153 21 εἰ-εῖ-[λες, Bélis (1992), 74, εἰ-ε[ῖλες, ἐχθρὸς ὃν Reinach (1909–13), 153, ὃν μέγας Diggle (1984), 71 22–3 τέ[κος Γαᾶς ἀπέ|στ]ηησας West 1 (1992), 7, τ[εοῖσι βέλεσιν ἔ|τρ]ηησας Reinach (1909–13), 153, 155, τε[and]ι̣ηησας or better]γ̣ηησας Bélis (1992), 74 23–4 πυκ|ν]ὰ̣ West 1 (1992), 7, συχ- |ν]ὰ̣ Reinach (1909–13), 153 25 [ὡς] δὲ Reinach (1909–13),153; cf. l. 21 26–7 ἀσέπτ[ως, χιόνος ὤλεθ' ὑγραῖς βολ|αῖ]ς Pöhlmann (1976), 60, χο|αῖ]ς West 1 (1992), 8.

[ ]<?> Ʊ ⋔ Γ [
27 [. .]cαλλιωγεενναν[

[ ] Ʊ ⋔ [
28 [. .]νθαλοcφιλομ[

[ ] ⋔ Γ Ʊ [
29 [. .]εδααμοιολοι̣[

[ ] ⋔ Ʊ ?[
30 [. .]ρωνεφοροο̣[

[ ] ✱ Ʊ̣[
31 [. .]τεονκ[

[ ] Ʊ[
32 [. .]εναικ[

[ ]Ʊ̣ [
33 [.]νθη[

[ ]?[
34 [

Fr. 3
] Γ̣ [
1]α̣πε[

] [
2]ρατ[

]Ʊ ✱̣[
3]ocυ̣[

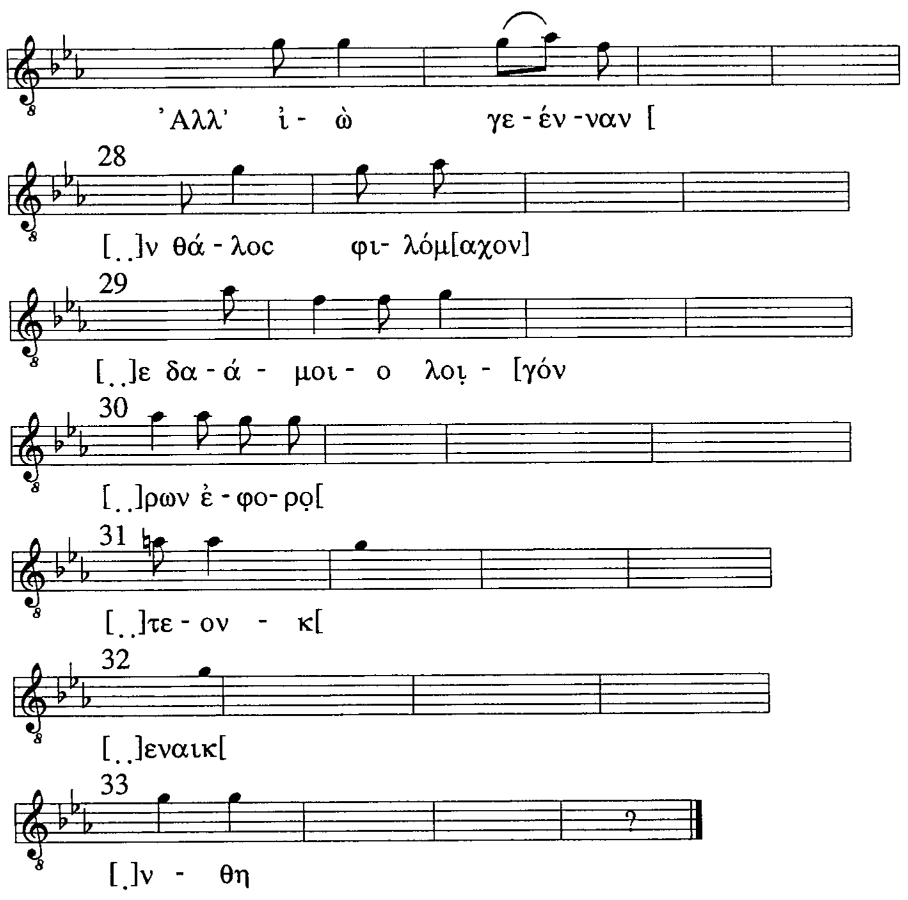
Fr. 4
1].α̣.ο̣[

]Θ Γ [
2]τ̣ιναο[

]Ʊ Φ[
3]τ̣εν[

Notation 27 <?> Bélis (1992), 79: a note is wanted at the beginning of the epilogue Ʊ Reinach (1909–13), 153, Bélis (1992), 79, Ω Pöhlmann (1970), 60: a misprint 29 ⋔ on δα shifted to αμ by West 30 ? Bélis (1992), 78 31 Ʊ Bélis (1992), 80, ⋔̣ Pöhlmann (1970), 62 32 Ʊ Bélis (1992), 80, Ʊ̣ Pöhlmann (1970), 62 33 Ʊ̣ Reinach (1909–13), 153, Bélis (1992), 80 34 ? Bélis (1992), 80.

Fr. 3 *Notation* 3 ✱̣ Bélis (1992), 81.


ʼΑλλʼ ἰ- ώ γε - έν -ναν [
28
[. .]ν θά - λος φι- λόμ[αχον]
29
[. .]ε δα - ά - μοι - ο λοι̣ - [γόν
30
[. .]ρων ἐ - φο- ρο̣[
31
[. .]τε - ον - κ[
32
[. .]εναικ[
33
[.]ν - θη
?

Text 27 cαλλιω, not cαλαιω lapis, -c. ἀλλʼ ἰώ Crusius (1894), 37 28]ν and μ[Bélis (1992), 79–80, φιλόμ[αχον Crusius (1894), 38 29]ε Reinach (1909–13), 153,]c Bélis (1992), 80 (metrically impossible) λοι̣[Pöhlmann (1970), 62, λο[Bélis (1992), 80, λο[ιγόν Crusius (1894), 38 30 εφορο̣[or εφορω̣[(metrically impossible) Bélis (1992), 80, ἐχθ]ρῶν ἐφορ[μάν Crusius (1894), 38.

Fr. 3 *Text* 1]α̣πε Reinach (1909–13), 155, Bélis (1992), 81,].πε Pöhlmann (1970), 62 3]οcυ̣[Bélis (1992), 81, π]ρ̣οcτ̣[Reinach (1909–13), 155,].οc.[Pöhlmann (1970), 62.

Fr. 4 *Text* 1].α̣.ο̣[Bélis (1992), 82,]αι̣..[Reinach (1909–13), 156 2]τ̣ι- or π̣ι- Reinach (1909–13), 156,]τ̣ι- Bélis (1992), 82 3]τ̣εν[Bélis (1992), 82,].εν[Pöhlmann (1970), 62,]εν[Reinach (1909–13), 156.

On the south outer wall of the Athenian treasury at Delphi, among festival decrees concerning the Athenian Pythaides of the years 138/7, 128/7, 106/5 and 97/6 BC,[1] are two metrical inscriptions with musical notation: a pair of Paeans to Apollo, represented by sixteen fragments. The allocation of fragments is facilitated by the fact that one group has vocal notation, the other instrumental.[2] After an initial unsuccessful attempt[3] it proved possible to establish the fragments' positions in the wall.[4] The larger ones could be combined in two blocks, each with two columns of text, and these are now on display in the Delphi Museum. In this reconstruction, however, fragments 3 and 4 of no. 20 and fragments f, g, h of no. 21 remained unplaced. Th. Reinach's version of the two Paeans may be found in many collections.[5]

Many of the older editors' readings can no longer be verified. This may be put down to damage in transport, especially affecting the edges of the stone.[6] The surviving fragments are, moreover, badly sintered in places. This means that the early drawings, squeezes, and photos cannot be disregarded even when we have the stones. For his final edition Reinach made use of the originals together with the other materials.[7] He took account of all the fragments and provided photographs of them all from squeezes.[8] As his apparatus indicates, many of his readings could even then not be confirmed on the originals by M. G. Colin. Half of fragment e had disappeared.[9]

E. Pöhlmann examined the inscriptions *in situ* in 1968. A search for fragments 3, 4, f, g, h in the magazines proved fruitless. However, the fragments in the Museum had recently been cleaned and rejoined, and this made it possible to correct many of Reinach's readings, especially at the edges. On this basis, and with regard to the older material mentioned above, he published a revised text of the Delphic Paeans in 1970.[10]

In 1992 A. Bélis re-edited them using additional evidence.[11] She was able to consult photographs taken when the fragments were first unearthed (Pl. III, IV); she rediscovered the missing fragments 3, 4, f, g, h; and she had the most up-to-date photographic techniques at her disposal. This enabled her to win new readings in the text and in the musical notation.[12] All the fragments are presented in drawings and many photos of originals and squeezes, with detailed commentary. Unfortunately, there are discrepancies between drawings, transcriptions, and commentary. But it is always possible to give a reliable text by comparing the commentary with the photos of the stones.

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[1] *FdD* III 2, 1909–13, nos. 11, 47, 49, 48.

[2] *FdD* III no. 137, vocal notation: fragments B (Inv. no. 517), A (Inv. no. 526), 3 (Inv. no. 494), 4 (Inv. no. 499); no. 138, instrumental notation: fragments A (Inv. no. 489), B (Inv. no. 1461), C (Inv. no. 1591), D (Inv. no. 209), a (Inv. no. 212), b + c (Inv. no. 226), d + e (Inv. no. 225), f (Inv. no.224), g (Inv. no. 215), h (Inv. no. 214).

[3] Weil (1893); Reinach (1893); Crusius (1894).

[4] Weil (1894); Reinach (1894). A drawing *FdD* II 1, 3; 1933, Taf. B und C, *FdD* III 2, Text 158, Planches XVI.

[5] Jan (1895); 432–49; (1899), 8–34; Smyth (1900), 529–38; Fairbanks (1900), 119–39; Diehl (1925), 303–9; Powell (1925), 141–59; Reinach (1926), 177–92; Del Grande (1960), 450–61; Ōki (1979), 12–34; Chailley (1979), 154–66.

[6] *FdD* III 2, 109–13, p. III.

[7] Reinach (1909–13), 148, 150 ff., 158 ff.

[8] Reinach (1909–13), 147–69, *FdD* III 2 Planches X.

[9] Reinach (1909–13), 158 erroneously: 'Le petit morceau e est perdu'.

[10] Pöhlmann (1970), no. 19–20, pp. 58–76.

[11] Bélis (1992).

[12] Bélis (1992), 24, 25.

Reinach had printed no. 20. 1–24 and no. 21. 1–27 and 31–40 with continuous supplements.[1] This is defensible, as the language is so formulaic and the structure of the two Paeans so similar (see below) that a restoration in one poem can often be supported by a parallel in the other. M. L. West in 1992 proposed alternative supplements for several problematic passages, and published transcriptions of the Paeans with a commentary on the music.[2] Our present transcriptions include supplements *exempli gratia*.

The author and the date of performance of the Paean with instrumental notation (no. 21) are known from the heading and the associated decree: Limenios, son of Thoinos, an Athenian, member of the artists' guild known as the Technitai, composed the Paean for the Pythais of the year 128/7, making honourable mention in the text (lines 20 f.) of the great choir of the Technitai that was to perform it.[3]

The heading of the other Paean, the one with vocal notation (no. 20), is damaged. Above the left-hand column can be seen Θεὸν ὃ ἐ[πόηcε, and above the right-hand one ᾿Αθ]ηναιος. The lettering links this Paean with that of Limenios from 128/7 BC, without excluding the possibility that it was composed for the Pythais of ten years earlier.[4] Again the singers are mentioned in the poem (no. 20. 16 f.; admittedly the key word [τεχνι]|τῶν is restored). But in the Pythais of 138/7 the Technitai were not yet participating; there was only a boy's choir with its choirmasters Elpinikos and Kleon, and this can hardly have performed a Paean of the Technitai.[5]

If one looks for clues in the festival decrees for the Pythais of 128/7, which are explicit to a provincial degree, one finds the boys' choir again,[6] then a list of the choristers of the Technitai, introduced as τοὺc ᾀιcομένουc τὸν Παιᾶνα, and finally a reference to ἀκροάματα of the Technitai, which may have included a further Paean. Other named participants are instrumental and vocal soloists, actors, and the three directors of the boys' choir, Elpinikos, Kleon, and Philion, two of whom had already performed this function in 138/7.[7] There is no mention of a second Paean.

The uncertainty has been resolved by A. Bélis. She recognized that the author of no. 20 was one ᾿Αθήναιοc ᾿Αθηναίου, who is mentioned in the same decree as Limenios, the author of no. 21.[8] It is his name that is to be read in the heading of the Paean, and not the ethnic ᾿Αθηναῖοc. Bélis was also able to show that the lacuna in the heading had room for no more than eight letters.[9]

This not only establishes the identity of the author of the hitherto anonymous Paean as Athenaios, son of Athenaios, but also fixes the date of the composition as 128/7. It is, to be sure, not clear which of the two Paeans is referred to in the decree in question, but the δέ in the heading to no. 21 is now easier to understand: it implies a connection with no. 20, inscribed immediately above. Colin and G. Daux had already guessed that the two poems belonged to the same year. Recently, St. Schröder, after careful study of all relevant arguments, proposed a dating of Limenios' Paean (no. 21) to 106/5, in spite of hitherto unsolved epigraphical problems.[1]

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[1] Reinach (1909–13), 152 f., 160–2.

[2] West 1 (1992), 6–8, 2 (1992), 288–301.

[3] The identity of the author was recognized by Colin (1909–13), 332 n. 1, (1913) 529–32, from the decree *FdD* III 2 no. 47. 22. For the historical context see Daux (1936), 521 ff., 584 ff., 708 ff.

[4] Reinach (1909–13), 148 and n. 1 (Colin). For different letter-cutters see Schröder (1999), 70.

[5] Cf. Sifakis (1967), 90. For the boys' choir see *FdD* III 2 no. 11, 3 f.; 20 ff.

[6] *FdD* III 2 no. 12, 3.

[7] *FdD* III 2 no. 47, 9 ff.; 20 ff.; 28 f.

[8] *FdD* III 2 no. 47, 19.

[9] Bélis (1992), 48 f., 53 f.

Two features of the notation link the Paeans with the older musical fragments.[2] Firstly, many syllables carry no note-symbols; it is to be assumed in such cases that the preceding note is repeated. The later practice was to write out repeated notes. Two apparent exceptions at no. 21. 12 f., 21 prove the rule, for there a fresh start is made on a new line or after paragraphos. Secondly it is to be observed that long syllables are often furnished with two notes which are not linked by a slur (ὑφέν) as in the later fragments,[3] and in such cases the vowel or diphthong is doubled or prolonged in the text. Occasionally the vowel is doubled but the second note-symbol is missing (nos. 20. 5?, 21. 26). It is noteworthy that in the closing Prosodion of Limenios' Paean (no. 21. 33–40) there is no division of long syllables between notes; it was evidently less appropriate to the isosyllabic Aeolic metre of that portion.[4]

In both Paeans the word accents are carefully followed in the melodic line. Only once in each poem is an unaccented syllable set to a higher note than the accented syllable of the same word: no. 20. 10 φερόπλοιο, and no. 21. 2 δικόρυφον. Once a δέ is higher than the following accented syllable (21. 10); and in θνατοιοῖϲ (20. 20), unless the stonecutter has made an error, the circumflex is set on a rising interval.

As there is no rhythmical notation (something that had existed long before, cf. nos. 3, 11, 12, 14–16), it is to be assumed that the rhythm corresponds to the metre. There is no ground for pressing the cretics used in both Paeans into 6/8 measure, as E. Martin wished to do,[5] even if Aristoxenus does know of six-mora 'cretics' (with a triseme long) in iambic metre.[6] The same applies to the Prosodion of Limenios' Paean, which scholars have transcribed in 12/8[7] or 3/4 time[8] with irrational longs, or in 2/4 time with super-longs.[9] As there is no indication of a rhythmization that diverges from the metrical pattern, we should simply convert the metrical quantities into monoseme or diseme note-values.

Athenaios' Paean remained unsupplemented in Reinach's version after line 24. O. Crusius tried to make use of the small frs. 3 and 4 to supplement lines 27–9; but then he erroneously placed fragment b in lines 32 f., although its instrumental notation shows that it belongs to Limenios' poem. Even with regard to content his suggestions are problematic, as he followed the first editors in placing fr. A (= col. ii), with the Gauls' invasion and the prayers, before fr. B (= col. i) with the invocation of the Muses.[10] P. W. Moens supplemented lines 25–33 without using frs. 3 and 4, but made the last portion (27–33) into a Prosodion in glyconics, despite two examples of vowels divided between notes.[11] Supplementation of the text, taken by Reinach to line 24, can in fact be extended to 25 with Crusius' proposals, and for 26 we have the wording of Limenios (line 33) to guide us. The rest (27–33), however, must remain lacunose, since fragments 3 and 4 still cannot be placed. It is at least certain that ἀλλ' ἰώ in 27 begins a new section; compare the new starts with ἀλλά in Limenios, 21 and 26. An apparent address to Apollo (27 f.) and the mention of a δᾶμοϲ (29) indicate that this Paean, like that of Limenios (33–40), concluded with a prayer, probably for Athens and Roman rule. As the cretic rhythm continues, the section should perhaps be considered as a Hyporchema rather than a Prosodion.[1] This possibility may be borne in mind in restoring the heading.[2]

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[1] Colin (1913), 531 no. 1; Daux (1936), 725; Schröder (1999), 65–75, but see 73 f.

[2] Cf. nos. 3–6; 8–16.

[3] The first example is no. 22. 6.

[4] Reinach (1909–13), 160; Koster (1936), 169. The earlier Paean to Apollo by Aristonoos, which is also preserved as a Delphic inscription (*FdD* III 2 no. 191; Diehl (1925), 297–300; Powell (1925), 162–4; cf. West (1982), 141), uses the same metres as Limenios' Prosodion.

[5] Martin (1953), 27–35; but see Wagner (1955), 214.

[6] Pearson (1990), 37 f.

[7] Reinach (1909–13), 169.

[8] Doutzaris (1934), 344 f.

[9] Martin (1953), 77 f.

[10] Cf. p. 70 n. 3.

[11] Moens (1930), 48–56; cf. above n. 4 and no. 20, lines 27 γεέννᾳν, 29 δαάμοιο.

Tonally Athenaios' Paean presents a varied picture, with the notes F (*e♭*), Φ (*g*), Y (*a♭*), O (*b*), M (*c′*), Λ (*d♭′*), K (*d′*), I (*d′*), Θ (*e♭′*), Γ (*f′*), B (*g♭′*), Ʊ (*g′*), ⋔ (*a♭′*), ✱ (*a′*). The notation is Phrygian and Hyperphrygian. In the two lowest tetrachords, Lichanos is avoided, giving an archaic pentatonic effect: [*d*] *e♭ g*; *g a♭ c′* (= Mese).[3] Above Mese there is modulation between a conjunct chromatic tetrachord (M Λ K Γ = *c′ d♭′ d′ f′*), continued upwards to B (*g♭′*), and a disjunct diatonic one (I Θ Γ Ʊ = *d′ e♭′ f′ g′*), continued upwards with the two inner notes of another chromatic tetrachord (⋔ ✱ = *a♭′ a′*). In addition we find the exharmonic note O = *b*, a semitone below Mese. As Reinach remarked,[4] modulations of key and register are closely connected in both Paeans with the sectioning of the text.[5]

This sectioning finds expression also in physical layout, content, and metre. Both Paeans are incised in wide columns without colometry,[6] but with clear indication of the aforesaid sections. In Athenaios the ending of the first section at πάγον (8) is marked by *brevis in longo*[7] and by line-break. This section employs the Phrygian scale *e♭ g a♭ c′ d′* (I) *e♭′ f′ g′ a♭′*, consistently avoiding *b♭* (cf. above). A *d♭* at line 7, from the (Hyperphrygian) conjunct tetrachord, prepares us for the next section (9–16). Here the notes used are *a♭ b c′ d♭′ d′* (K) *d′* (I) *e♭′ f′ g′ a♭′*. The *d′* (I) and *e♭′* (Θ) still recall the earlier Phrygian, but the prevailing key is now Hyperphrygian with the chromatic tetrachord *c′ d♭′ d′* (K) *f′*, corroborated by the *g♭* of line 11 (Trite synemmenon) and chromaticized further by the ten times repeated accidental *b*, for which R. P. Winnington-Ingram compared similar phenomena in other musical texts.[8] This section is marked off by hiatus at ἀναμέλπεται. A third section ends at line 24 with the death of the Python serpent; here the loss of the end of the line deprives us of any palpable sign of the division. This portion uses the notes familiar from the first section (*e♭ g a♭ c′ d′* (I) *e♭′ f′ g′ a♭′*). Again there is a Hyperphrygian *d♭* (20), and also an accidental *b* (23) which recalls the tonality of the second section.

In the damaged ending of the Paean (25–34) the beginning of the prayers is clearly marked by ἀλλ' ἰώ (27). But the continuation of the cretic metre is matched by the maintenance of the same tonality. In lines 25–34 (and the fragments 3 and 4, which probably belong here) we find the notes *g d′ e♭′ f′ g′ a♭′ a′*—again a segment from the Phrygian scale, with a chromatic *pyknon* appearing at the top end. Obviously, form and content are closely connected, as in Limenios' Paean (see no. 21).

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[1] Crusius (1894), 61; Fairbanks (1900), 55, 66, 91, 125; Koster (1936), 210.

[2] Pöhlmann (1970), 58; Bélis (1992), 54.

[3] Winnington-Ingram (1936), 24, 33–5, compared the old Spondeion scale; cf. ibid. 35–8 on Limenios.

[4] Reinach (1909–13), 150 f., cf. ibid. 154 f., 159, 164 f. on Limenios.

[5] Hagel (2000).

[6] Col. i: 43.8 cm., col. ii: 44.8 cm.; see Bélis (1992), 49 and below p. 85 n. 1.

[7] If [ἦν] is rightly restored in line 9.

[8] Winnington-Ingram (1936), 33, 34 and n. 2, 40 and n. 1, 41 and nn. 2 f.

No. 21 DELPHI INV. 489, 1461, 1591, 209, 212, 226, 225, 224, 215, 214 128/7 BC
(Paean of Limenios)

Col. i/ii [. .]ι̣ανδεκαιπ[. . . .]δ̣ιονειcτ[. . . . .]η̣cε[.
. . . . | . .]νλιμηνι[. . .]ο̣ινο[. . . . .]

Col. i

[]⊔ ⊏ < Ç̣ [ ]⊏ [ ]
1 ι̣τεπιτηλεcκοπονταανδ̣επαρ̣[. . . .]αν[. . . . .]

< ⊏ < ⊔ < ∪ < ⊏ ∪̣ [ ]<[ ]
2 δικορυφονκλειειτυνυμνωωνκα[. . .]χ[. . . . .]

[ ] ⊔ I V < V [ ]∪ ⊔̣[ ]
3 πιεριδεcαινιφοβολουcπ̣ετραcναιεθ[. . .]κωνιδ̣[. .]

⊔ ∪⊔ ⊏ <̣ ⊏ ⊔ ⊏ [ ] ∪
4 μελπετεδεπυθιονχ[.]υ̣cεοχαιτανε[. .]τ̣ονευλυραν

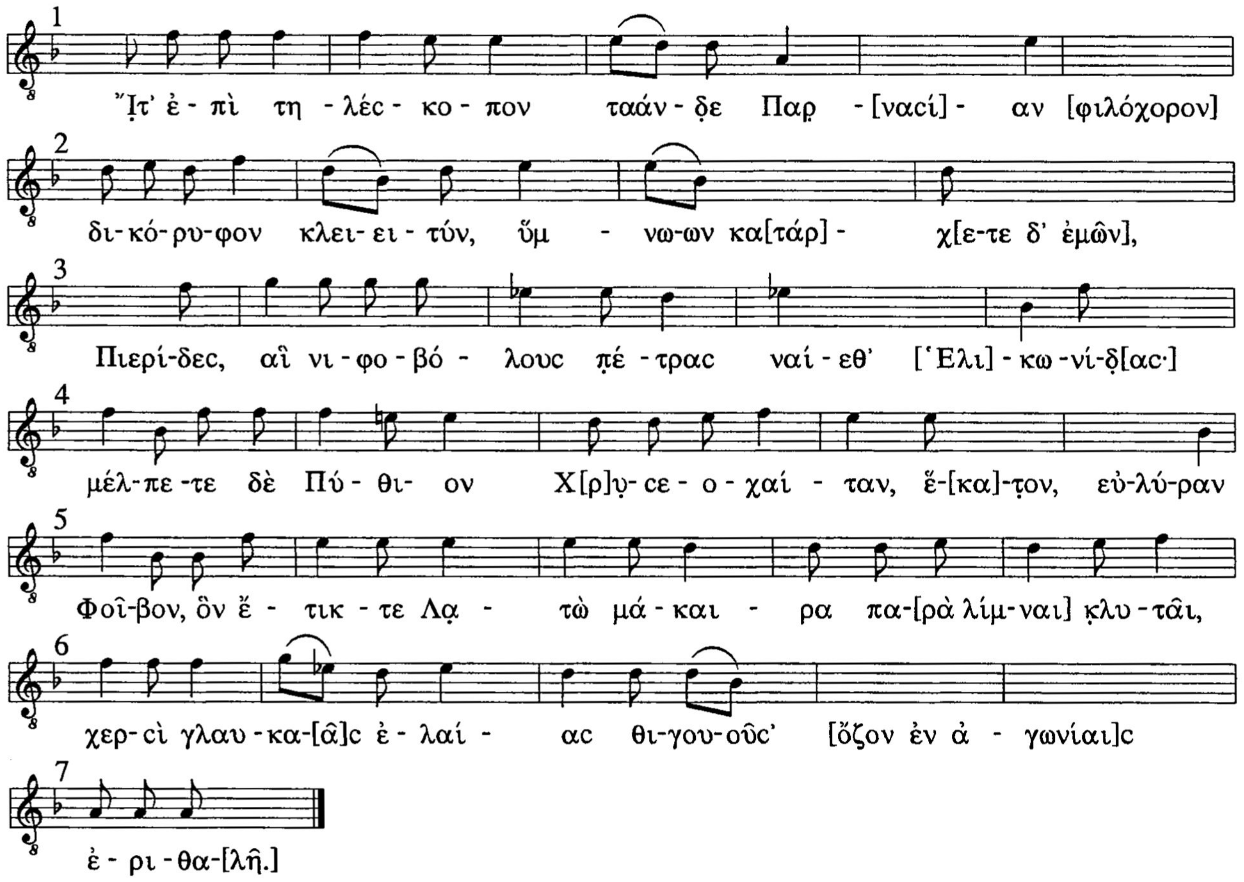
⊔ ∪ ⊔ ⊏ < ⊏[ ] <̣ ⊏ ⊔
5 φοιβονονετικτελα̣τωμακαιραπα[. . . . .]κ̣λυται

I V < V < ∪[ ]?
6 χερcιγλαυκα[.]cελαιαcθιγουουc[. . . . .]c

C [ ]
7 εριθα[. .]

Notation 1 Ç̣ Reinach (1909–13), 164, ? Bélis (1992), 89 2 ⊏ ∪̣ Reinach (1909–13), 160, F Bélis (1992), 89 3 [ ] ⊔ Pöhlmann (1970), 68, [? ? I] ⊔ Bélis (1992), 87, 89 ⊔̣ Bélis (1992), 89, pl. III 2 4 <̣ Bélis (1992), 89 5 <̣ or Ṿ Bélis (1992), 89 f., < Reinach (1909–13), 160 6 ∪ Bélis (1992), 90, ∪̣ Reinach (1909–13), 160 ? : perhaps <̣ Bélis (1992), 90 7 C Reinach (1909–13), 160, Ç̣ or <̣ Bélis (1992), 90.

Col. i/ii [Πα]ι̣ὰν δὲ καὶ π[ροcό]δ̣ιον εἰc τ[ὸν Θεὸν ὃ ἐπό]η̣cε[ν
καὶ προcεκιθάρι | cε]ν Λιμήνι[οc Θ]ο̣ίνο[υ ᾿Αθηναῖοc.]


1
῎Ι̣τ' ἐ - πὶ τη - λέc - κο - πον ταάν - δ̣ε Παρ̣ - [ναcί] - αν [φιλόχορον]
2
δι-κό-ρυ-φον κλει-ει - τύν, ὕμ - νω-ων κα[τάρ] - χ[ε-τε δ' ἐμῶν],
3
Πιερί-δεc, αἳ νι - φο - βό - λουc π̣έ - τραc ναί - εθ' [῾Ελι] - κω - νί-δ̣[αc·]
4
μέλ-πε -τε δὲ Πύ - θι- ον Χ[ρ]υ̣- cε - ο - χαί - ταν, ἕ-[κα]-τ̣ον, εὐ-λύ-ραν
5
Φοῖ-βον, ὃν ἔ - τικ - τε Λα̣ - τὼ μά - καιρα πα-[ρὰ λίμ-ναι] κ̣λυ - τᾶι,
6
χερ-cὶ γλαυ - κα-[ᾶ]c ἐ - λαί - αc θι-γου-οῦc' [ὄζον ἐν ἀ - γωνίαι]c
7
ἐ - ρι - θα-[λῆ.]

Text Title: [. .]ι̣ανδεκαιπ[. . . .]δ̣ιονειcτ[col. I.]η̣cε[fr. h . .]νλιμηνι[. . .]ο̣ινο col. II [πα]ι̣ὰν δὲ καὶ π[οθό]δ̣ιον (or π[ροcό]δ̣ιον) εἰc τ[ὸν θεὸν ὃ ἐπό]η̣cε[ν Reinach (1909–13), 163 καὶ προcεκιθάρι|cε]ν Λιμήνι[οc Θ]οίνο[υ ᾿Αθηναῖοc] Colin (1909–13), 332 n. 1.
Supplements to 1–27, 29–40 Weil (1894), 349, 352, 355 f. and Reinach (1909–13), 160–2.
1 ι̣τ Bélis (1992), 88, [῎Ι]τ' Reinach (1909–13), 160 ταανδ̣επαρ̣ Bélis (1992), 88 f., ταaν[δ]επα[ρ Reinach (1909–13), 160]αν[fr. h 2]χ[fr. h and a κα[and]χ[Bélis (1992), 87, 89, κ[and]χ̣[Reinach (1909–13), 160 3 π̣ε- Pöhlmann (1970), 68, πε- Bélis (1992), 89 4 χ[ρ]υ̣ Bélis (1992), 89, χ̣[ρ]υ̣ Reinach (1909–13), 160 6 c[Bélis (1992), 90, c̣[Pöhlmann (1970), 68.

C Γ[ ]? ⊏⊔ < ⊏ < ⊻[ ]
8 παα̣[. . . .]αθηcεπολοcουρανιοc̣[. . . . .]

[ ]<̣ ⊔ Γ ⊔ < ⊏ ⊔[ ] <
9 [. . . . .]ηνεμουcδεcχεναιθηηραε̣[. . . . .]ειc

[ ] Γ ⊏ ⊻ Κ Γ ⊻ ⊔[ ] C
10 [. .]ο̣μουcληξεδεβαρυβρομοννηη̣[. . . . .]ει

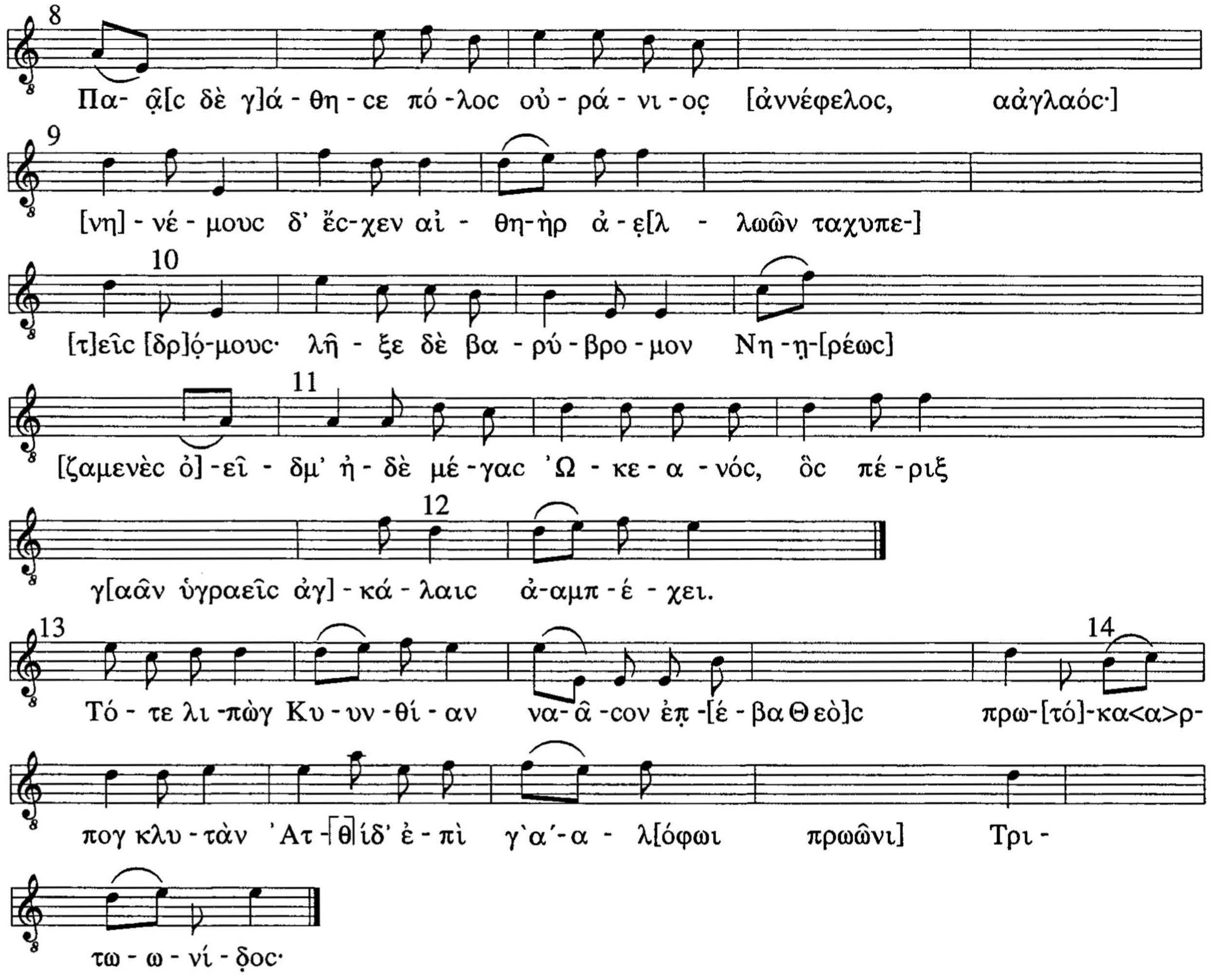
< ⊻ < ⊔ [ ] ⊔
11 δμηδεμεγαcωκεανοc οcπεριξγ[. . . . .]κα

< ⊏ ⊔ ⊏
12 λαιcααμπεχει.

—— ⊏ ⊻ < ⊏ ⊔ ⊏ Γ Κ̣[ ] < [ ]
13 τοτελιπωγκυυνθιανναακονεπ̣[. . . . . .]cπρω[. .]

Κ ⊻ < ⊏ ϟ ⊏ ⊔ ⊏̣ ⊔[ ]? < ⊏[ ]⊏
14 κα<α>ρπογκλυτανατ⌈θ⌉ιδεπιγ`α´α λ[. . . . .]τριτωωνιδ̣οc

Notation 8 C Γ Bélis (1992), 94, Γ̣ Pöhlmann (1970), 68 ? Bélis (1992), 85, 93 9 Γ lapis: ⌈⊏⌉ Reinach (1909–13), 164 ⊔ above αε̣- Weil (1894), 351, Reinach (1909–13), 164, ⊻ Bélis (1992), 95 10 ⊔ Bélis (1992), 95 C Reinach (1909–13), 164, <̣ Bélis (1992), 95 13 Κ̣ Bélis (1992), 99, ⊏̣ Reinach (1909–13), 164 14 ⊏ ⊔ Reinach (1909–13), 161, Bélis (1992), 98, ∪ Bélis (1992), 85 ?: ⊻ or Κ Bélis (1992), 100.


8
Πα- α̣̂[c δὲ γ]ά - θη - cε πό -λοc οὐ - ρά - νι - οc̣ [ἀννέφελοc, αἀγλαόc·]
9
[νη] - νέ - μουc δ' ἔc-χεν αἰ - θη-ὴρ ἀ - ε̣[λ - λωῶν ταχυπε-]
10
[τ]εῖc [δρ]ό̣-μουc· λῆ - ξε δὲ βα - ρύ - βρο - μον Νη -η̣-[ρέωc]
11
[ζαμενὲc ὀ] -εῖ - δμ' ἠ - δὲ μέ -γαc 'Ω - κε - α - νόc, ὃc πέ -ριξ
12
γ[αᾶν ὑγραεῖc ἀγ] - κά - λαιc ἀ-αμπ - έ - χει.
13
14
Τό - τε λι -πὼγ Κυ - υν - θί - αν να- α̂ -cον ἐπ̣ -[έ - βα Θεὸ]c πρω-[τό]-κα<α>ρ-
πογ κλυ - τὰν 'Ατ -⌈θ⌉ίδ' ἐ - πὶ γ`α´-α - λ[όφωι πρωῶνι] Τρι -
τω - ω - νί - δ̣οc·

Text 8 παα̣[c Bélis (1992), 85, 93 9 αε̣[λλωων Weil (1894), 351, ε̣ or π̣ Reinach (1909–13), 164, Bélis (1992), 94 10 νηη̣[Bélis (1992), 95, Νηη[ρέωc Weil (1894), 351 13]cπρω[fr. f 14 κα<α>ρπο- and ατ⌈θ⌉ιδ Reinach (1909–13), 164, καρπο- and ατοι⟦ο⟧δ lapis γ`α´αλ- Reinach (1909–13), 164: `α´ linked with the note ⊏̣ which belongs to α τριτωωνιδ̣οc fr. f, g and C.

C < Ɔ < V Ι V < V [ ]<[ ] [ ]
15 μελιπνοονδελιβυcαυδαγχεω[. . . . .]πεν[.]

∪ C ⊏ C ∪̣Ɔ [ ]
16 δειειανοπαμειγνυμενοcαιειολ[. . . . .].[. . . . .]

[ ] ∪ < ∪ C ∪ Ɔ ∪ C [ ]
17 [.]μαδιαχεμπετροκατοικητοcαχ[. . . . .]ο̣δεγεγα

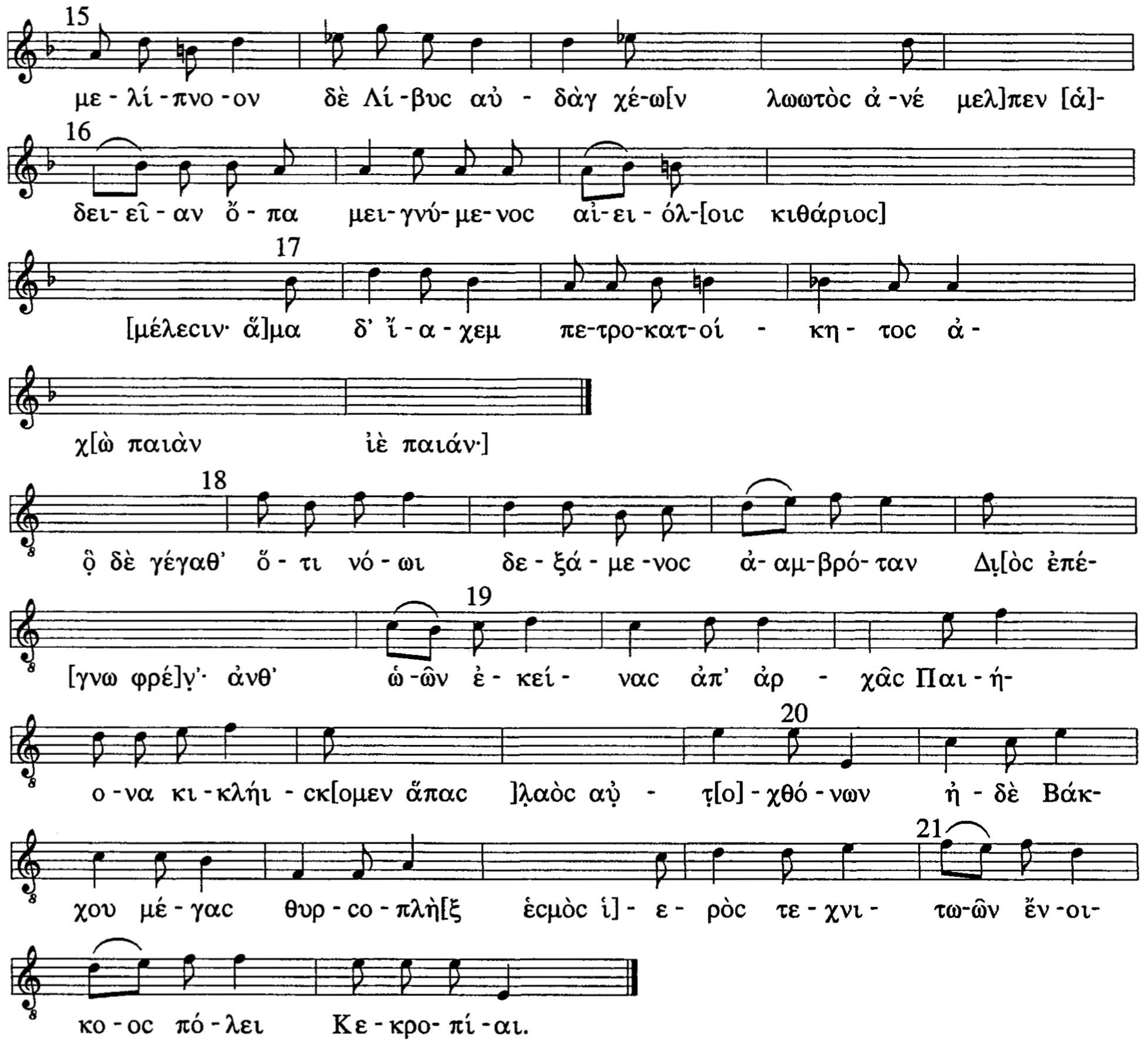
⊔ < ⊔ < K ⊻ <⊏ ⊔ ⊏ ⊔[ ] ⊻ K
18 θοτινοωιδεξαμενοcααμβροτα`ν´δι̣[. . . . .]γ̣ανθωων

⊻̣ < ⊻ < ? ⊏ ⊔< ⊏ ⊔ ⊏̣[ ]⊏
19 εκεινα cαπαρχαcπαιηονακικληιcκ[. . . . .]λ̣αοcαυ̣τ̣[.]

Γ ⊻ ⊏ ⊻ K L C[ ]⊻̣ < ⊏̣
20 χθονωνηδεβακχουμεγαcθυρcοπλη[. . . . . . .]εροcτεχνι

⊔ ⊏⊔ <̣ ⊏ ⊔ ⊏ Γ Γ [ ]
21 τωωνενοικοοcπολεικεκροπιαι—αλ̣[. . . . .]ωιδον

Notation 15 Ɔ Colin (1909–13), 164, Pöhlmann (1970), 70, Bélis (1992), 100, C Reinach (1909–13), 164]<[fr. f, Bélis (1992), 100 16 ⊏ C Reinach (1909–13), 161, Bélis (1992), 98, ⊏ Bélis (1992), 85 ∪̣ Pöhlmann (1970), 70, ∪ Bélis (1992), 100: [∩] ∪ lapis 19 ⊻̣ Bélis (1992), 105 ? Bélis (1992), 85, 104 ⊏̣ Pöhlmann (1970), 70, ⊏̣ or Γ̣ Bélis (1992), 105 20 L Reinach (1909–13),161, Bélis (1992), 104, ⊔ Bélis (1992), 85 ⊏̣ Pöhlmann (1970), 72, ⊏ Reinach (1909–13), 165 ('presque l'aspect d'un carré') 21 <̣ Pöhlmann (1970), 72: [C] < lapis Γ Bélis (1992), 106, ⊏ Reinach (1909–13), 161.


15
με - λί - πνο - ον δὲ Λί - βυc αὐ - δὰγ χέ-ω[ν λωωτὸc ἀ - νέ μελ]πεν [ἁ]-
16
δει- εῖ - αν ὄ - πα μει- γνύ- με- νοc αἰ- ει - όλ-[οιc κιθάριοc]
17
[μέλεcιν· ἅ]μα δ' ἴ - α - χεμ πε-τρο-κατ-οί - κη - τοc ἀ -
χ[ὼ παιὰν ἰὲ παιάν·]
18
ὃ̣ δὲ γέγαθ' ὅ - τι νό - ωι δε - ξά - με - νοc ἀ- αμ-βρό- ταν Δι̣[ὸc ἐπέ-
[γνω φρέ]ν̣'· ἀνθ'
19
ὡ - ῶ̂ν ἐ - κεί - ναc ἀπ' ἀρ - χᾶc Παι - ή-
ο - να κι - κλήι - cκ[ομεν ἅπαc]λ̣αὸc αὐ̣ - τ̣[ο] - χθό - νων
20
ἠ - δὲ Βάκ-
χου μέ - γαc θυρ - cο - πλὴ[ξ ἑcμὸc ἱ] - ε - ρὸc τε - χνι -
21
τω-ῶν ἔν - οι-
κο - οc πό - λει Κε - κρο- πί - αι.

Text 15]πεν[fr. g 16 δει- Reinach (1909–13), 164, δ̣ει- Bélis (1992), 98].[Bélis (1992), 100: ο̣ or μ̣ 17]ο̣δεγεγα Bélis (1992), 105, pl. III 2,]δ̣ε̣γε̣γα̣ Reinach (1909–13), 161 18 `ν´ lapis, Reinach (1909–13), 164 δι̣- Reinach (1909–13), 161, δω̣- Bélis (1992), 105 19 λ]αὸc α[ὐτο-] Reinach (1909–13), 161,]λ̣αοc αυ̣τ̣[ο-] Bélis (1992), 105 21 αλ̣[Pöhlmann (1970), 72, Bélis (1992), 106, ἀ[λλὰ Reinach (1909–13), 161.

⊔ < ⊏ ⊔ ⊏ L ⊏ ⊔̣[ ] Γ
22 οcεχειειcτριποδα βαινεπιθεοcτιβ[. . . . .]αρναᾳ

N ⊏ ⊔ < ⊏ Γ C < V] V <[ ]
23 cιανδειραδαφιλενθεοναμφιπλοκ[. . . . .]νωω̣[. .]

Ↄ ∪ Ç ⊏ C ∪ [ ]
24 δαφναcκλαδονπλεξαμενοcααπ[. . . . .]

F C ∪ C F Ↄ ∪ C [ ]
25 ααμβροταιχειριcυρωναναξγ[. . . . .]

C F ⊏ ⊏ ⊔ [ ]
26 κοραι—αλλαλαατουcερατογλ̣[. . . . .]

⊻ <̣ ⊻ ⊔[ ]Ṇ < ⊏̣ [ ]
27 [. .]μπαιδαγα[. .]τ̣επεφνεcιοιcο[. . . . .]

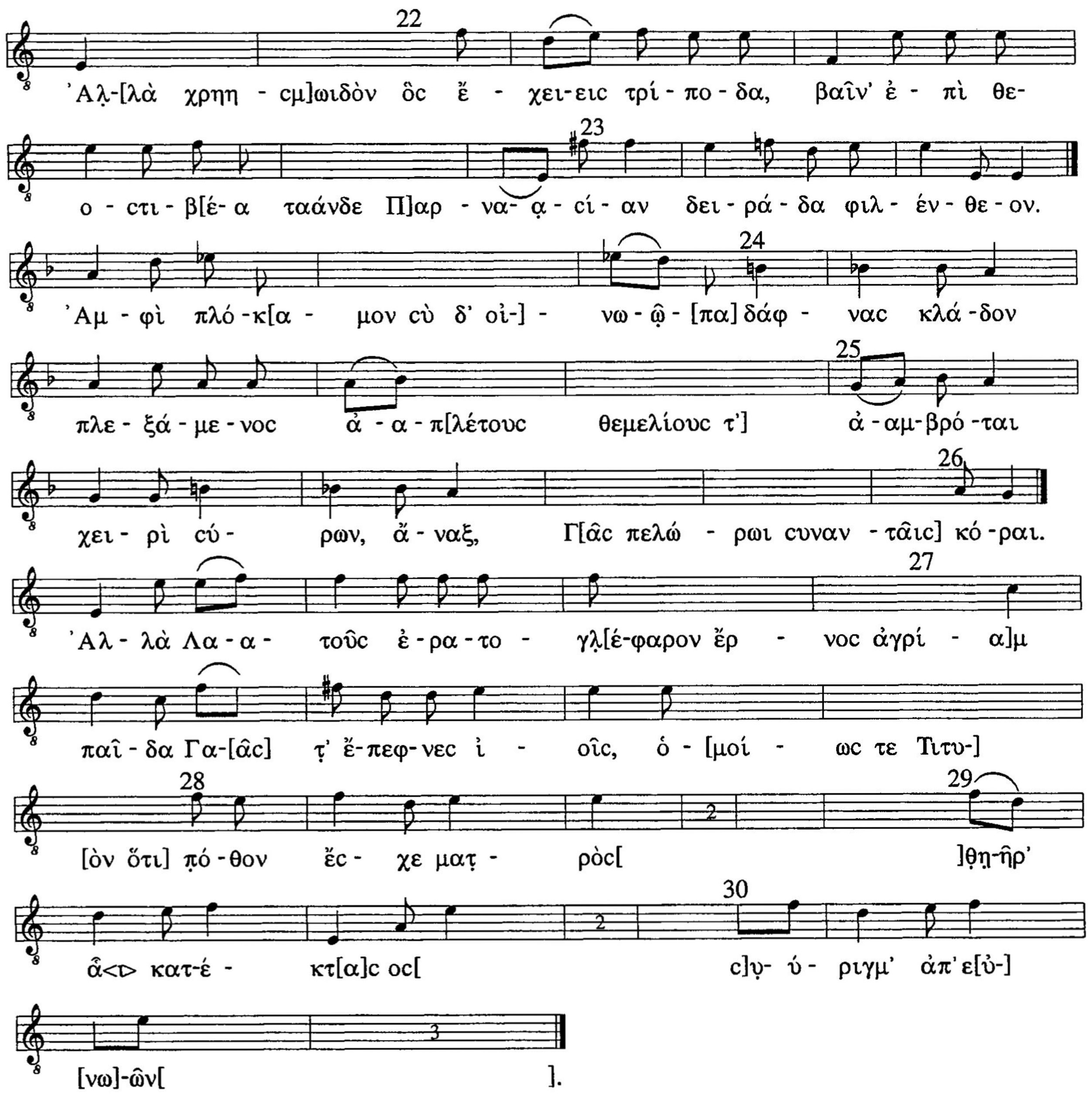
Col. II

⊔̣ ⊏ ⊔ < ⊏̣ [
28 π̣οθονεcχεματ̣ροc.[

⊔< ⊏ ⊔ Γ C ⊏̣[
29 θ̣ηηρακατεκτ[.]coc[

[ ]⊔ < ⊏ ⊔[ ] ⊏[
30 [.]υ̣υριγμαπε[. . .]ων[

Notation 22 ⊔ < Bélis (1992), 104, 106, pl. VIII 1–2, ⊏ < ⊏ Reinach (1909–13), 161 L lapis, ⌈⊔⌉ Reinach (1909–13), 165 ⊔̣ or ⊏̣ Reinach (1909–13), 165 Γ Bélis (1992), 106, pl. III 2, ⊏ Bélis (1992), 85, Γ̣ Pöhlmann (1970), 72 23 N Pöhlmann (1970), 72, Bélis (1992), 106, pl. VIII 1–2, Ç Reinach (1909–13), 165, Ṿ Colin (1909–13), 165, cf. line 27, see p. 84 V on -πλοκ- and -νω- Reinach (1909–13), 161, Bélis (1992), 113, Y lapis V < Bélis (1992), 113, pl. III 2, V <̣ Pöhlmann (1970), 72 24 Ç Pöhlmann, C Reinach (1909–13), 161, F̣ or Γ̣ Bélis (1992), 113, pl. VIII 1–2: ⟦I⟧ C lapis 26 ⊏ ⊏ lapis, cf. Bélis (1992), 112, pl. VIII 1, ⌈Γ⌉ ⊏ Reinach (1909–13), 161, Bélis (1992), 113 ⊔ (or alternatively ⊏) shifted by West 2 (1992), 298 over second syllable of λαατουc 27 <̣ Reinach (1909–13), 161, <̣ or Ç Bélis (1992), 85, 111, 113, pl. VIII 1 Ṇ Bélis (1992), 113 f., ⊔ Reinach (1909–13), 161: see p. 84 ⊏̣ Pöhlmann, ⊏̣ or Ç Bélis (1992), 114, pl. VIII 1, ⟦C⟧ ⊏ lapis 28 ⊔̣ fr. e, Pöhlmann (1970), 72, ⊔ Bélis (1992), 86, 111 ⊏̣ Reinach (1893), 606, now lost 29 < Reinach (1909–13), 161, ⟦C⟧ < lapis, Bélis (1992), 114 Γ Pöhlmann (1970), 72, Bélis (1992), 114, ⌈⊏⌉ Reinach (1909–13), 165 ⊏̣ Bélis (1992), 114.


22
᾿Αλ̣-[λὰ χρηη - cμ]ωιδὸν ὃc ἔ - χει-ειc τρί - πο - δα, βαῖν᾿ ἐ - πὶ θε-
23
ο - cτι - β[έ- α ταάνδε Π]αρ - να- α̣ - cί - αν δει - ρά - δα φιλ - έν - θε - ον.
24
᾿Αμ - φὶ πλό -κ[α - μον cὺ δ᾿ οἰ-] - νω - ῷ̣ - [πα] δάφ - ναc κλά -δον
25
πλε - ξά - με - νοc ἀ - α - π[λέτουc θεμελίουc τ᾿] ἀ -αμ-βρό -ται
26
χει - ρὶ cύ - ρων, ἄ - ναξ, Γ[ᾶc πελώ - ρωι cυναν - τᾶιc] κό -ραι.
27
᾿Αλ - λὰ Λα - α - τοῦc ἐ - ρα - το - γλ̣[έ-φαρον ἔρ - νοc ἀγρί - α]μ
παῖ - δα Γα-[ᾶc] τ̣᾿ ἔ-πεφ- νεc ἰ - οῖc, ὁ - [μοί - ωc τε Τιτυ-]
28
[ὸν ὅτι] π̣ό -θον ἔc- χε ματ̣ - ρὸc[
29
]θη̣-ῆρ᾿
2
30
ἃ<τ> κατ-έ - κτ[α]c οc[c]υ̣- ύ - ριγμ᾿ ἀπ᾿ ε[ὐ-]
2
[νω]-ῶν[ ].
3

Text 22 θεο- Reinach (1909–13), 161: θ⟦η⟧εο lapis, Bélis (1992), 106]αρναᾳ- Pöhlmann (1970), 72, Bélis (1992), 106, pl. III 2,]αρνα- Reinach (1909–13), 161 23]νωω̣[Bélis (1992), 113, pl. III 2,]νω[Reinach (1909–13), 165 26 γλ̣[Pöhlmann, Bélis (1992), pl. VIII 1, γ[Bélis (1992), 85, 111 27 ὁ[μοῦ τ᾿ ἀναβοαῖc· ἣ δὲ] Reinach (1909–13), 161, 165, ὁ[μοίωc τε Τιτυὸν ὅτι] Moens (1930), 91–4, see p. 84 28 π̣ο fr. e μα̣τ̣ροc.[Bélis (1992), 111, 114, cf. pl. III 2, IX 1, μα̣τροc[Pöhlmann (1970), 72 29 θ̣η̣ fr. e θ̣η̣ῆρ᾿ ἃ<ι> or θη̣ῆρά <τε> West, θη]ήρ, ἃ κατέκτ[αα]c ὃc Weil (1894), 356 30 c]υ̣ύριγμ᾿ Pöhlmann (1970), 72, Bélis (1992), 114, 122, pl. IX 1, [cυ]ύριγμ᾿ ἀπ᾿ ε[ὐνω]ῶν Weil (1894), 356.

[ ] <⊏ Γ[ ]ϟ [ ]
31 [. .]. .εφρουρε[. . . .]δεγαα[. . . . .]

I ϟ ⌿ϟ ⊔[ ]I ϟ̣ ⌿ [ ]
32 βαροç̣αρηcοτε[. .]ομμαντοcυ̣[. . . . .]

< ⊔ ⊏ ⊔ I⊔ I ⌿ ϟ[ ]
33 θεcληζομενοcωλεθυγραιχι̣[. . . . .]

⊔ ⊏ ⊔ ⊏ ⊔ <[ ]
34 cωιζεθεοκτι[.]κτονπαλλαδοc[. . . . .]

∪ <⊏⊔ < ∪ < V Ç̣[ ]
35 τεθεατοξωνδεcποτικρηcιω[. . . . .]

C ∪ < V < [ ]
36 κυδιcτα̣κ̣αιναεταcδελφωντ[. . . . .]

C < ∪ C ∪ ⊔ ⊏ [ ]
37 βιοιcδωμα̣c̣ιναπταιcτουcβακχου[. . . . .]

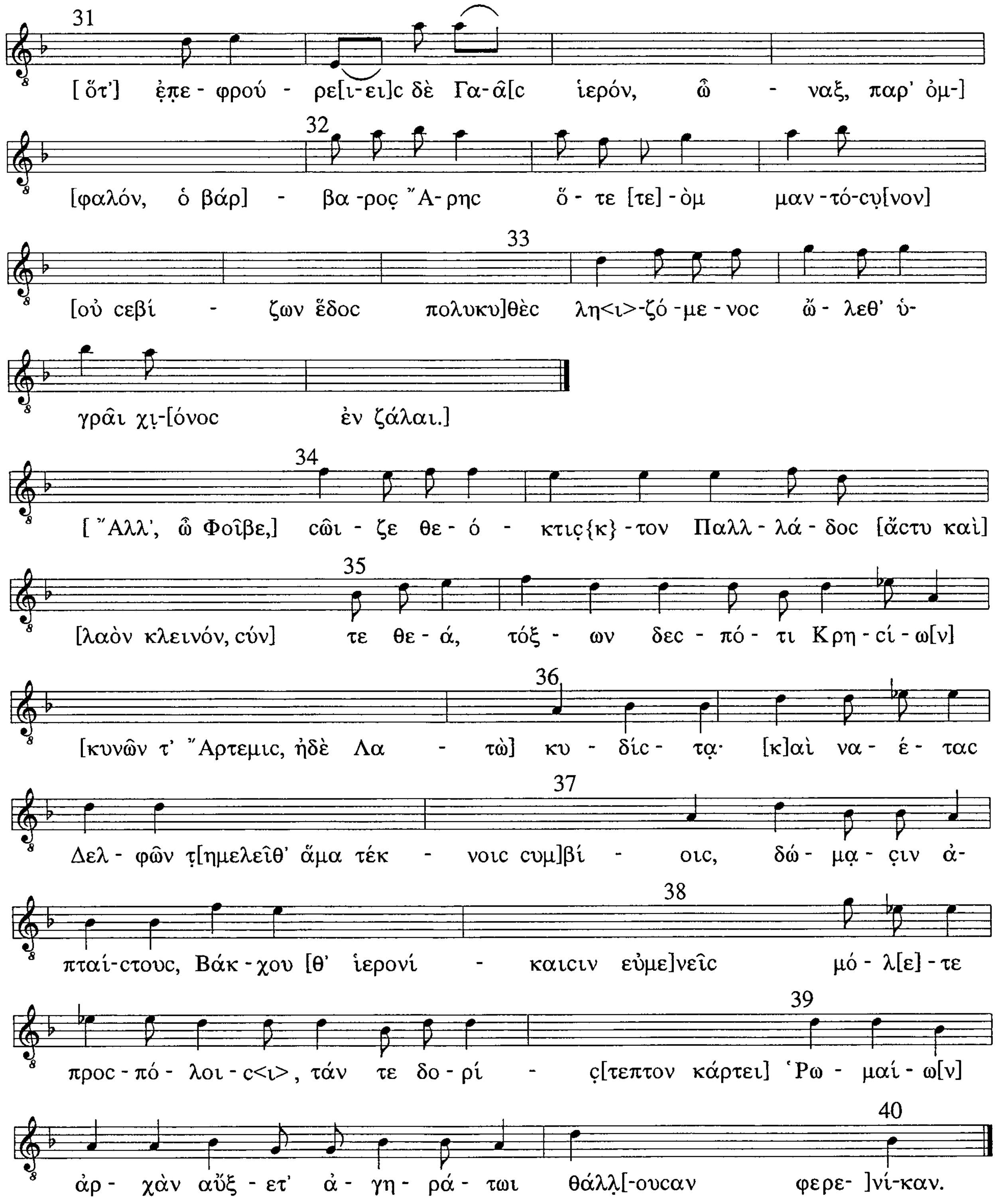
I V < ∪ < [ ]
38 νειcμολ[.]τεπροcπολοιc<ι>ταντεδοριc̣[. . . . .]

< ∪ C ∪ F ∪ C < [ ]
39 ρωμαιω[.]αρχαναυξεταγηρατωιθαλλ̣[. . . . .]

∪ ?
40 νικαν

Notation 31 <⊏ lapis, Bélis (1992), 121 f., pl. IX 1, Λ Γ erroneously p. 86 32 ϟ ⊔ lapis, Bélis (1992), 121 f., pl. IX 1, ⊔ erroneously p. 86 34 ⊔ Bélis (1992), 126 f., ⊔̣ Reinach (1909–13), 162 35 Ç̣ Bélis (1992), 126 f., pl. IV 36 ∪ < Bélis (1992), 126 f., pl. IX 1, ∪ <̣ Pöhlmann (1970), 74 37 ∪ C ∪ Reinach (1909–13), 162, Bélis (1992), 126, ∪ ∪ erroneously Bélis (1992), 86 40 ? Reinach (1909–13), 162, 165, Bélis (1992), 126 f., Ç̣ Reinach (1894), pl. XXII.

Text 31 [. .]ε̣π̣εφρουρει[Bélis (1992), 122, pl. IX 1, [ὅτ'] ἐ̣π̣εφρούρε[ιειc] δὲ e.g. West, [. . .] ἐφρούρε[ιειc] Reinach (1909–13), 161 δὲ γαᾶ[c Reinach (1909–13), 161, δὲ γαα[λατᾶν Bélis (1992), 122, metrically not possible 32 -ροç̣: ⟦ε⟧c lapis Bélis (1992), 122 [τ]<ε>ὀμ Bélis (1992), 122 cυ̣[Pöhlmann (1970), 74, c[υ- Reinach (1909–13), 161 33 πολυκυ]θὲc Weil (1894), 357 λη<ι>ζόμενοc Bélis (1992), 121, 123 34 θεόκτιc̣{κ}τον Reinach (1909–13), 162, 165, θεόκτιτ̣{κ}τον Bélis (1992), 127 36 κ̣αι West τ[Bélis (1992), 126 f. 38 [εὐ-με]| νεῖc Reinach (1909–13), 162, lapis, pl. IX 1–2, ⟦ν⟧μειc Bélis (1992), 127 μόλ[ε]τε Bélis (1992), 126, pl. IX 1, -λ̣[ε]τ̣- Pöhlmann (1970), 74 -λοιc<ι> Reinach (1909–13), 162 39 θαλλ̣[Bélis (1992), 126.


31
[ὅτ'] ἐ̣π̣ε - φρού - ρε[ι-ει]c δὲ Γα-ᾶ[c ἱερόν, ὦ - ναξ, παρ' ὀμ-]
32
[φαλόν, ὁ βάρ] - βα -ροç̣ Ἄ- ρηc ὅ- τε [τε] - ὀμ μαν -τό-cυ̣[νον]
33
[οὐ cεβί - ζων ἕδοc πολυκυ]θὲc λη<ι>-ζό -με - νοc ὤ- λεθ' ὑ-
γρᾶι χι̣-[όνοc ἐν ζάλαι.]
34
[Ἄλλ', ὦ Φοῖβε,] cῶι - ζε θε- ό - κτιc̣{κ} -τον Παλλ - λά - δοc [ἄcτυ καὶ]
35
[λαὸν κλεινόν, cύν] τε θε - ά, τόξ - ων δεc - πό - τι Κρη - cί - ω[ν]
36
[κυνῶν τ' Ἄρτεμιc, ἠδὲ Λα - τὼ] κυ - δίc - τα̣· [κ]αὶ να- έ - ταc
37
Δελ - φῶν τ̣[ημελεῖθ' ἅμα τέκ - νοιc cυμ]βί - οιc, δώ - μα̣ - c̣ιν ἀ-
38
πταί-cτουc, Βάκ -χου [θ' ἱερονί - καιcιν εὐμε]νεῖc μό - λ[ε] - τε
39
προc - πό - λοι - c<ι>, τάν τε δο - ρί - c̣[τεπτον κάρτει] Ῥω - μαί - ω[ν]
40
ἀρ - χὰν αὔξ - ετ' ἀ - γη - ρά - τωι θάλλ̣[-ουcαν φερε-]νί-καν.

Th. Reinach's edition of the Limenios Paean left one section (lines 28–30) unsupplemented.[1] The difficulty was line 28, which Reinach took to refer to the serpent Python and its mother Gaia.[2] P. W. Moens, starting from the τε in 27, which points forward to a second heroic deed of Apollo's to balance the fight with the serpent, arrived at the correct interpretation of the passage.[3] The reference must be to the violation of Leto by Tityos (also a child of Gaia) and the punishment of his πόθοc by Apollo. To Moens's parallels, in particular *Od.* 11. 576–81 καὶ Τιτυὸν εἶδον ... Λητὼ γὰρ ἥλκηcε and (even closer in wording) Apollodorus 1. 4. 1 κτείνει δὲ ... καὶ Τιτυόν. οὗτοc ... Λητὼ θεωρήcαc πόθωι καταcχεθεὶc ἐπιcπᾶται, can be added no. 50. 9 (the Berlin Paean), Λατοῦ[c...] ματρὸc λῶβαν, and Nonnus, *Dion.* 20. 76 f., ἰὸν ... | Γηγενέοc Τιτυοῖο ποθοβλήτοιο φονῆα.

Line 28 of the Paean, then, πόθον ἔcχε ματρὸc[, refers to Tityos and Leto. In 29–30 †θηηρα† κατέκτ[α]c, ὃc[... c]υύριγμ' ἀπ' ε[ὐνω]ῶν, the narrative returns to the fight with the serpent, as H. Weil realized, reading θηήρ, ἃ κατέκταc and assuming a female dragon as in the Homeric Hymn to Apollo (300–4, 354–62).[4] But κατέκταc is surely addressed to Apollo, and the monster is a male δράκων in Athenaios' Paean (no. 20, line 22), not a δράκαινα. The reading θηῆρα κατέκταc, which Moens follows,[5] would suit the melodic line, but is metrically impossible, as the cretic rhythm does not admit two shorts between two longs, and the single long θηη- cannot be divided between two cretics. A. Bélis reads θηῆρ' ἃ κατέκταc ὃc[, which is neither intelligible nor in accord with her translation.[6] Its seems necessary either to read θηῆρ' ἃ<ι> κατέκταc[7] or to assume the omission of a particle, e.g. θηῆρά <τε> κατέκταc. In lines 31–3 Limenios adds the most recent of Apollo's relevant achievements, the repulse of the invading Gauls in 279 BC.

The following notes are employed: Γ (*e*), L (*f*), F (*g*), C (*a*) ∪ (*b♭*), Ↄ (*b*), K (*b*), ⊻ (*c′*), < (*d′*), V (*e♭′*), ⊏ (*e′*), ⊔ (*f′*), N (*f#′*?) ⌶ = Z (*g′*), ϟ = И (*a′*), ł (*b♭′*). With the exception of N, they belong to the Hypolydian and Lydian scales: Hypolydian *e f g a b* (K) *c′ d′ e′ f′ g′ a′ b′*, Lydian *e f g a b♭ b* (Ↄ) *d′ e′ f′ g′ a′ b′*, the middle tetrachord in the latter series being chromatic, the rest diatonic. In other words, as in the Athenaios Paean, there is modulation between a conjunct chromatic tetrachord and a disjunct diatonic one. We also find modulation into Hyperlydian, the Lydian Paranete Z (*g′*) being treated as Hyperlydian Mese; the note V (*e♭′*) then appears as the sole intermediate degree between *g′* and *d′* (= Hyperlydian Hypate, Lydian Mese).

The note N is also at home in the Hyperlydian scale, where it represents Lichanos (*f′*). But where it appears in Limenios' piece, in line 23 and perhaps in line 27, it is associated with the Hypolydian notes < ⊏ ⊔ (*d′ e′ f′*). We cannot suppose that the composer intended it to signify the same note for which he otherwise (at least fifty times) correctly wrote ⊔.[8] He must be using it for the chromatic degree above ⊔, i. e. *f#′*, though for this we might have expected ⊐.

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[1] For the history of the discovery, state of preservation, dating, structure, and notation technique see above on no. 20, pp. 70–3.

[2] Reinach (1909–13), 161, 163, 165.

[3] Moens (1930), 91–4.

[4] Weil (1894), 356: '*ainsi tu expiras, monstre, qui avais tué quiconque se trouvait à ta portée*'.

[5] Moens (1930), 99, after Reinach (1893), 608.

[6] Bélis (1992), 112, 114, 120.

[7] Cf. λη<ι>ζόμενοc no. 21, line 33.

[8] Bélis (1992), 109 f.

Like the Athenaios Paean, the Limenios Paean is incised in wide columns without colometry,[1] but with various external indications highlighting the structure of the composition. An initial Lydian section extends to the line-break after ἐριθα[λῆ] (line 7). A second, Hypolydian section ends with line-break after ἀαμπέχει (12), followed by paragraphos in the left margin of line 13.[2] A third, also Hypolydian, is delimited only by the modulation following Τριτωωνίδοc (14). The fourth section, in chromatic Lydian, extends to [παιάν] (17). A fifth, in Hypolydian, is marked off by the hiatus and mid-line paragraphos after Κεκροπίαι (21); the sixth, again probably Hypolydian, by the *brevis in longo* in φιλένθεον (23). Hiatus and paragraphos after κόραι (26) mark off the seventh, chromatic Lydian section. The end of the eighth, Hypolydian section falls in the damaged portion of line 30. The ninth, Lydian section is demarcated by the paragraphos in the left margin (33/34) and by the change of metre after [ζάλαι] (33). The tenth, Lydian section, like the first, fourth, and seventh, is characterized by the appearance of the Synemmenai.

Comparing the two Paeans, one is immediately struck by their similarities. The framework in both cases—amplified by Limenios only in details—consists of an invocation of the Muses, the epiphany of Apollo, the sacrifice, a recital of the god's wondrous deeds, and concluding prayers. Something of the structure of Limenios' composition is indicated in the heading: 'Paean and Prosodion to the god'. The main portion in cretics, lines 1–33, is the Paean, while the remainder (33–40), in aeolic rhythms (glyconics and choriambic dimeters, with a pherecratean as clausula), is the Prosodion, containing the prayers. Athenaios' Paean has a corresponding structure. The main part, 1–27 (cretics), is to be regarded as the Paean. The concluding part (27–34), clearly marked off by its opening words ἀλλ' ἰώ, is likewise in cretics, and contains the prayers, fragmented but recognizable. Therefore its heading could have been '(Paean and Hyporchema) to the god'. If Limenios' Paean has ten sections as against Athenaios' five, the explanation is that he has expanded the traditional framework that underlies both poems with additions, among which the story of the god's birth (8–12), the building of the temple (23–36), and the Tityos episode (27–8) deserve particular mention. On the other hand, the two Paeans are bound together by the close correspondence of musical and textual structure, as well as by certain programmatic touches in the music.[3]

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[1] Col i: 44.5 cm.; col. ii: 46.5 cm.; see Bélis (1992), 50 f. On column-widths in musical texts see Johnson (2000), 66–8.

[2] Bélis (1992), 99, pl. VIII 2; Pöhlmann (1970), pl. 20.

[3] Cf. Pöhlmann (1960), 64–71; West 2 (1992), 201, 289, 291–2, 295, 298.

No. 22 MYLASA INV. 3 (Hymn to Sinuri) First century BC

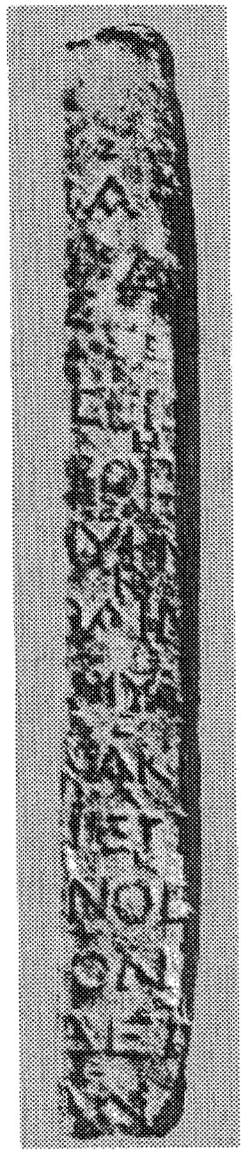


FIG. 15: Hymn to Sinuri, Fr. A

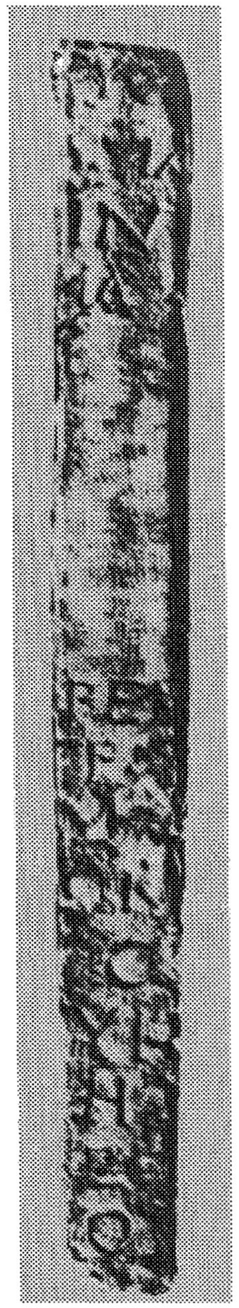


FIG. 16: Hymn to Sinuri, Fr. B

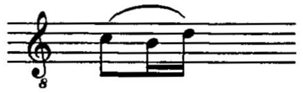
	Fr. A		Fr. B		
1	Ζ̣]ι̣α.[	1	].υθ̣[	15	?]πο.[
2	].δ[	2	]αμα[	16	]υι.[
3	Λ̣̇]ζε̣ν̣[	3	Μ̣̇]ιν[	17	]η.[
4	Κ̣]cεε̣[	4	Ε̣]μα.[	18	]. .[
5	Η]ροε[	5	⊥̣]ι [	19	]υο.[
6	:Ξ̣Ο̣͜!]η̣υρμ̣[	6	] [	20	]. .[
7	Κ̣]θαιμ̣[	7	] [		
8	Ε]γ̣ι̣υα̣[	8	] [		
9	Ε̣?]λ̣ακ[	9	] [		
10	Α̣?]γ̣εγ̣γ̣[	10	] [		
11	Κ]νοε̣[	11	]ρ̣ει̣[		
12	⊥̣]ον[	12	Α̣]τ̣ρα[		
13	Α]δεν̣[	13	?]μ.[		
14	Ε]ανα̣[	14	?]ω̣ν̣[		

Notation A 1 Ζ̣: or perhaps Ξ̣, Δ̣ 4 Κ̣: or Χ̣, Λ̣′? 7 Κ̣: or Ρ̣ 9 Ε̣: or Ξ̣? 10 ?: perhaps Ʊ.

B 3 Μ̣̇: or Ʊ̣? 5 ⊥̣: or Ⅽ̣, Ε̣? 11–20 It is not certain that there are any musical signs in these lines.

Text A 6 perhaps]μ̣υρμ̣[10 perhaps εγν̣[

The existence of these fragments, inscribed on blocks from the sanctuary of the Carian god Sinuri near Mylasa, was reported by L. Robert in 1945.[1] Their present location is unknown.[2] The readings were taken by M. L. West from the published photograph, and must be regarded as provisional.[3] A transcription of the scattered musical notes is superfluous, except perhaps for A 6:



If the dating of the inscription is correct, this is the earliest known instance of a long syllable divided among three notes and of the articulatory notation with dicolon (certainly) and hyphen (perhaps). These notes belong to a diatonic tetrachord in the Hyperionian or Hypolydian scale. Not all of those in the other lines are compatible with this key.

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[1] Robert (1945), no. 81, pp. 104–6, pl. I; see figs. 15 and 16.

[2] Blümel (1995), 43.

[3] West 1 (1992), 8–10.

No. 23 SEIKILOS, Funeral Epitaph Second century AD

1 ε ι κ ω ν η λ ι θ ο c
2 ε ι μ ι · τ ι θ η c ι μ ε
3 c ε ι κ ι λ ο c ε ν θ α
4 μ ν η μ η c α θ α ν α τ ο υ
5 c η μ α π ο λ υ χ ρ ο ν ι ο ν

C Z̄ Ż̄ KIZ Ī
6 ο c ο ν ζ η c φ α ι ν ο υ

K̄ I Ż İ̄K̄ O
7 μ η δ ε ν ο λ ω c c υ

C̄ ŌΦ̇̄ C K Z
8 λ υ π ο υ π ρ ο c ο λ ι -

İ K̇İ K C̄ ŌΦ̇̄
9 γ ο ν ε c τ ι τ ο ζ η ν

C K O İ Ż
10 τ ο τ ε λ ο c ο χ ρ ο -

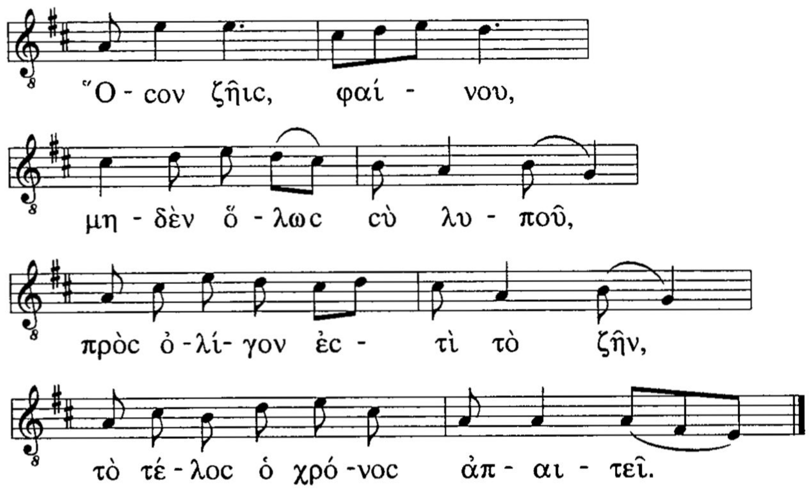
K̇ C C̄ CẊ̄¬
11 ν ο c α π α ι τ ε ι

12 c ε ι κ ι λ ο c ε υ τ ε ρ (π ο υ)
13 ζ η [

Notation 6 KIZ lapis, Jan (1899), 38, KIZ Wagner (1921) 285 Ī Pöhlmann (1970), 54, Ī lapis 7 I Pöhlmann (1970), 54, I˙ lapis İK Pöhlmann (1970), 54, İK lapis, İK Jan (1899), 38, İK Wagner (1921), 285 f., 296 8 ŌΦ̇̄ Pöhlmann (1970), 54, OΦ̇ lapis, Jan (1899), 38, OΦ̇ Wagner (1921), 295 9 İK̇İ lapis, Wagner (1921), 296, İK̇I Jan (1899), 38 ŌΦ̇̄ Pöhlmann (1970), 54, OΦ̇ lapis, Jan (1899), 38, OΦ̇ Mountford (1929), 147 f. 11 K̇ lapis, Wagner (1921), 296, K Jan (1899), 38 CẊ¬ lapis, Wagner (1921), 286, 295, CẊ¬ Jan (1899), 38, CẊ¬ Martin (1953), 52: perhaps C̄Ẋ̄¬ ?

Εἰκὼν ἡ λίθοc εἰμί· τίθηcί με Cεικίλοc ἔνθα

μνήμηc ἀθανάτου cῆμα πολυχρόνιον.

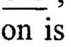

Ὅ - coν ζῆιc, φαί - νου,
μη - δὲν ὅ - λωc cὺ λυ - ποῦ,
πρὸc ὀ - λί- γον ἐc - τὶ τὸ ζῆν,
τὸ τέ - λοc ὁ χρό -νοc ἀπ - αι - τεῖ.

Cεικίλοc Εὐτέρ(που)

ζῆι.

Text 2 EIMI· lapis 12 CEIKIΛOC EYTEP lapis (P with *apex*), Cεικίλοc Εὐτέρ(που) Marx (1906), 145
13 ZH [lapis, ζῆ Marx (1906), 145, see pls. 1b and 2 for undamaged surface after EYTEP and before and after ZH.

In 1883 Sir William Ramsay published a grave stele in the form of pillar, inscribed with two poems: an elegiac distich, and a little song with musical notation.[1] The object had been discovered during the building of a railway in the neighbourhood of Aydın (Tralleis), and had entered the private collection of the building firm's director, Edward Purser. As the pillar was broken at the bottom, its base was sawn off straight so that it could stand and serve as a pedestal for Mrs Purser's flowerpots. This resulted in the loss of one line of text, as appears from comparison of a squeeze made by Georg Weber sometime before 1893 with a photograph taken by Alfred Laumonier in 1922.[2] The pillar passed into the collection of Purser's son-in-law, Mr Young (later de Jongh) in Buca, Izmir, where it remained until the Turkish defeat of the Greeks in September 1922. The Dutch Consul in Izmir took it over for safe keeping during the ensuing disturbances, and his son-in-law, Willem Daniëls, later brought it by way of Istanbul and Stockholm to The Hague. In 1966 it was acquired by the Department of Antiquities of the National Museum in Copenhagen, and on 6 December 1967 J. Raasted reintroduced it to the world in a public lecture.[3] It is now exhibit no. 35 in Room 11 of the Museum, with the inventory number 14897.[4]

The lettering of the inscription dates it to the second century AD. Characteristic features are the numerous swallow-tail serifs, especially on E, M, N, Σ; the almost triangular Φ with prolongation below, ligatures between N, H, and M;[5] and above all the peculiar form of omega, , attested in dated inscriptions of 127/8 and 149/50.[6] The fully developed rhythmical notation is also to be noted.[7]

O. Crusius was the first to appreciate the significance of the musical notation.[8] Various others applied themselves successively to the establishment of the notation text,[9] while E. Martin studied the rhythmics,[10] and W. Fischer made a dubious attempt to illuminate the melody from modern parallels and to find echoes of it in Gregorian chant and German folksong.[11] The text has been reprinted with bibliography by W. Peek, F. B. Poljakov, and R. Merkelbach and J. Stauber.[12]

The note series, ˥ (*e*), X (*f#*), Φ (*g*), C (*a*), O (*b*), K (*c#′*), I (*d′*), Z (*e′*), corresponds to a segment from the Ionian scale. The melody respects the word accents except for the upward leap of a fifth on ὅcον (line 6), which is paralleled in no. 24, and the figure on ἐcτι (line 9), which would be no exception if the accentuation ἔcτι were admitted.[13]

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[1] Ramsay (1883), 277 f. (no. 21).

[2] Crusius (1893) reproduces a drawing of the squeeze; for the photograph see *BCH* 48 (1924), 506 f., fig. 20 (Chronique des fouilles).

[3] Raasted (1967), 1–7. We are indebted to the author for the text of the lecture.

[4] Cf. pls. 1b and 2. For the *fata columnae* cf. Poljakov (1989), 186–8.

[5] Guarducci, i (1967), 385 f.

[6] Larfeld (1914), 274; Guarducci, i (1967), 383. The best parallels are an ephebic list (mid second century) and an epitaph (second century), both from Smyrna: Guarducci, i (1967), 376 fig. 201; Merkelbach–Stauber i (1998), 545 no. 05/01/62 (personal communication of Ioanna Spiliopoulou-Donderer).

[7] It was on this that Henderson (1957), 369, based her dating to the Roman period, though she thought the lettering might be put as early as the second century BC.

[8] Crusius (1891), 163–72; (1893), 160–200.

[9] Monro (1894), 133, 145; Reinach (1894), 365 ff.; (1926), 171; Jan (1895), 450 ff.; (1899), 35 ff.; Wagner (1921), 285 f., 295 ff.; Mountford (1929), 147 f.

[10] Martin (1953), 48–55.

[11] Fischer (1953), 153–63.

[12] Peek (1955), 609 no. 1955; Poljakov (1989), 186–8 no. 219; Merkelbach–Stauber (1998), 207 no. 02/02/07.

[13] Cf. Winnington-Ingram (1955), 68. For further melodic analysis see West 2 (1992), 301 f.

The deficiencies of the available facsimiles and photographs[1] left earlier commentators in uncertainty over several details, especially the arsis-pointing, long-marks, and hyphens (ties) beneath the notes. Since the reappearance of the original, from which Raasted has checked the text, these uncertainties have been eliminated. Supposed points above letters of the text (6 ΦΑΙΝΟΥ̇, 8 ΛΥΠΟΥ̇) turn out to be mere flaws in the surface of the stone. In line 12 the bow of the P has a projection indicating the abbreviation of a name.[2]

Certain inconsistencies of the rhythmical notation remain. The addition of a superfluous point above the last note in line 6 (the I) will be a simple mistake by the stonecutter. The stigme above the first I in line 7, which is in the thesis, not the arsis, is also an error, unless it results from later damage to the stone. We must accept as an aberration the fact that ὅλωc in line 7 is notated with $\dot{\mathrm{Z}}\ \underset{\smile}{\overline{\mathrm{I\,K}}}$ but -γον ἐcτ- in line 8 with $\dot{\mathrm{I}}\ \dot{\mathrm{K}}\ \dot{\mathrm{I}}$, which is rhythmically the same thing.[3] Perhaps the most important observation is that the triseme sign can stand over two notes linked by a hyphen. R. P. Winnington-Ingram had questioned this in the case of no. 42,[4] but it is now established by the two instances of $\underset{\smile}{\overset{\dot\sqcup}{\mathrm{O\ \Phi}}}$ in lines 8–9 (not that this helps for no. 42). By analogy we might have expected $\underset{\smile}{\overset{\dot\sqcup}{\mathrm{C\ X\ \urcorner}}}$ over the last syllable in line 11 rather than $\mathrm{C}\ \underset{\smile}{\overset{\dot\sqcup}{\mathrm{X\ \urcorner}}}$; but the stonecutter did not have enough room for a longer triseme. None of the new readings affects the reliability of the transcription. In the groups $\overset{\dot\sqcup}{\mathrm{O\ \Phi}}$ the time-value must obviously be divided up ♪♩ in accordance with the underlying iambic metre .

Many scholars have discussed the meaning of the *subscriptio*, without definite result.[5] It is now clear that the surface is undamaged on each side of CEIKIΛOC EYTEP. EYTEP therefore can only be understood as an abbreviation of the father's name, usually supplemented as Εὐτέρ(που). This interpretation, proposed by F. Marx,[6] is supported by the above-mentioned projection on the bow of the P. The ZH which Ramsay read in the following line, clearly visible on the pre-1893 squeeze, likewise stood alone in mid line with undamaged surface on either side; it means 'is alive', in other words Seikilos set up the inscription during his lifetime.[7]

Marx took Seikilos to be a Carian name.[8] The apparently Greek name of his father does not rule this out; however, no other Seikiloi are attested. L. Zgusta in his monograph on the onomastics of Asia Minor took it to be a Hellenized **Sicilus*, 'Sicilian',[9] but this is problematic, as the Latin form is *Sĭculus* and the Greek Cĭκελόc. If the father's name was really Euterpes, it implies a family line of professional musicians. (One thinks of Φήμιοc Τερπιάδηc in the Odyssey.) They may have belonged to the cύνοδοc τῶν ἀπὸ Ἰωνίαc καὶ Ἑλληcπόντου (τεχνιτῶν) attested for Tralleis by a third-century inscription.[10]

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[1] Cf. above, n. 2.

[2] Observed by I. Spiliopoulou-Donderer; cf. Guarducci, i (1967), 402.

[3] Cf. KIZ above φαι- in line 6 without hyphen.

[4] Winnington-Ingram (1965), 191.

[5] Cougny (1890), 595, 607; Wessely (1891), 20; Marx (1906), 145; Carcopino (1922), 273; Picard (1925), 123–5; Robert (1937), 412 n. 4.

[6] Marx (1906), 145; so also Poljakov (1989), 188; Merkelbach–Stauber (1998), 207.

[7] Merkelbach–Stauber (1998), 207: 'Seikilos, der Sohn des Euterpes; er lebt (noch)'.

[8] Marx (1906), 145, 'Seicilos barbarus et Car vivus sibi ... monumentum fecit cum inscriptione'.

[9] Zgusta (1964), 459 § 1390.

[10] *OGIS* 501. 6; cf. Poland (1934), 2511; Gould–Lewis (1968), 298.

No. 24 MESOMEDES(?), Invocation of the Muse Second century AD

C Z Z Φ Φ Φ C C
1 Ἄειδε Μοῦcά μοι φίλη,

I Φ M M
2 μολπῆc δ' ἐμῆc κατάρχου,

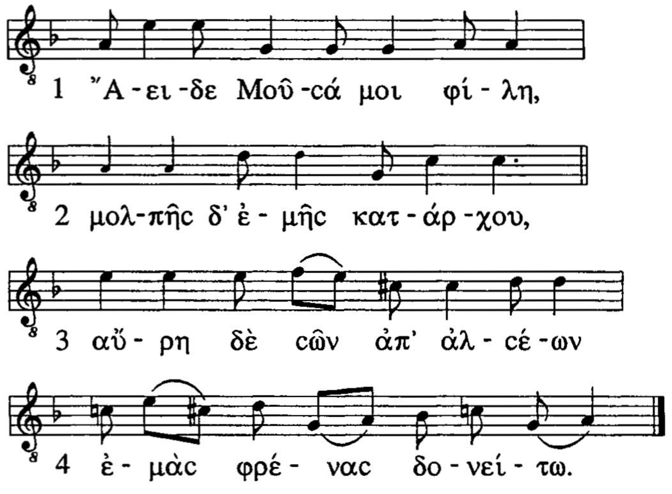
Z⁻ Z Z EZ N N I I⁻
3 αὔρη δὲ cῶν ἀπ' ἀλcέων

M ZN I ΦC P MΦC
4 ἐμὰc φρέναc δονείτω.

Notation in **N, C** *and* **V**:

N 1 C ZZΦ Φ C C 2 I Φ M M
C 1 C ZZΦ Φ Φ C C 2 I Φ M M
V 1 C ZZΦ Φ Φ C C 2 Φ M M

N 3 Z⁻ ZZEZ N N II⁻ 4 M ZN I ΦC PM ΦC
C 3 Z⁻ ZZEZ N N II⁻ 4 M ZN I ΦC PM ΦC
V 3 Z⁻ ZZ Z N N II 4 M ZN I ΦC PM ΦC


1 Ἄ - ει - δε Μοῦ - cά μοι φί - λη,
2 μολ - πῆc δ' ἐ - μῆc κατ - άρ - χου,
3 αὔ - ρη δὲ cῶν ἀπ' ἀλ - cέ - ων
4 ἐ - μὰc φρέ - ναc δο - νεί - τω.

Text Title in **α** Εἰc Μοῦcαν ἴαμβοc βακχεῖοc The initial letter is enlarged in **β** In the left margin of **V** ἴαμβοc, which is omitted in **β** Over μολπῆc in **V N** cπoῦ, in **C** cπονδεῖοc, which is omitted in **Ve** Bellermann (1840), 53 f. inferred a metrical scholion ἴαμβοc – cπονδεῖοc – ἴαμβοc – βακχεῖοc, which belonged to lines 1–2.

Nos. 25–6 MESOMEDES, Invocations of Calliope and Apollo Second century AD

No. 25

C PM P C Φ C
5 Καλλιόπεια cοφά,

Φ NC C C C C ┐ R Φ
6 Μουcῶν προκαθαγέτι τερπνῶν,

R Φ C P M I M
7 καὶ cοφὲ μυcτοδότα,

M I E Z Ͱ MP CMI
8 Λατοῦc γόνε, Δήλιε Παιάν,

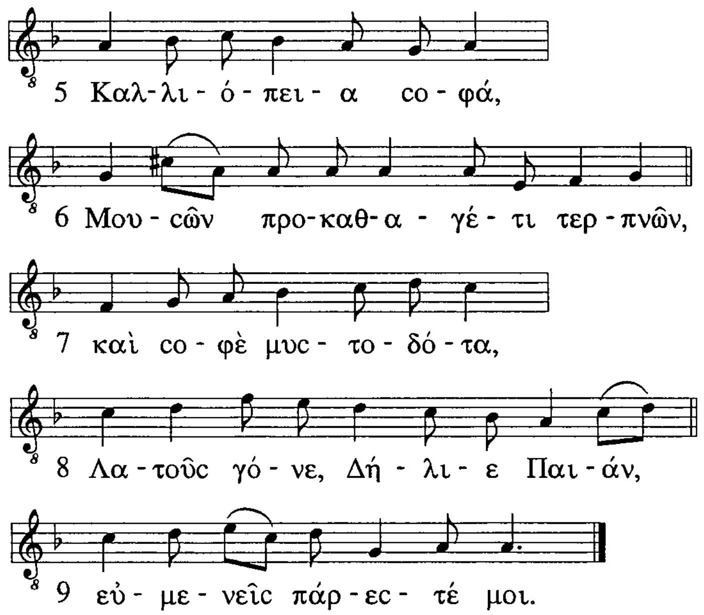
M I ZM I Φ C C
9 εὐμενεῖc πάρεcτέ μοι.

No. 25 *Notation* 6 ΦNC **α**, ΦMC Winnington-Ingram (1936), 42 8 ͰMP Pöhlmann (1970), 14, IMP Reinach 1 (1896), 17, ΓMP **α**.

Notation in **N, C** *and* **V**:

5**N**	C PMPC Φ C	6Φ NC C C C	┐ AΦ
5**C**	C PMPC Φ C	6Φ NC C C C C [C]	┐ RΦ
5**V**	C PMPC Φ C	6Φ NC C C C C	┐ RΦ
7**N**	P Φ C PM I M	8M I EZͰ MPC MI	
7**C**	P Φ C PM I M	8M I EZΓ MPC MI	
7**V**	R Φ C PM I M	8M I EZΓ MPC M	
9**N**	M I ZMI Φ C C		
9**C**	M I ZMI Φ C C		
9**V**	M ZMI Φ C C		

No. 25


5 Καλ-λι - ό - πει - α co - φά,
6 Μου - cῶν προ-καθ-α - γέ - τι τερ - πνῶν,
7 καὶ co - φὲ μυc - το - δό - τα,
8 Λα - τοῦc γό - νε, Δή - λι - ε Παι - άν,
9 εὐ - με - νεῖc πάρ - εc - τέ μοι.

Text 5 In the right margin of **V** ἄλλωc The initial letter is enlarged in **C** Καλλιόπεια **VCVe**, Καλλιόπα **N** 6 προ[υ]καθαγέτι **N** 8 Δήλιε **β**, δ᾽ ῞Ηλιε **V**.

No. 26

1 Εὐφαμείτω πᾶc αἰθήρ,
2 γῆ καὶ πόντος καὶ πνοιαί,
3 οὔρεα, τέμπεα cιγάτω,
4 ἦχοι φθόγγοι τ᾽ ὀρνίθων·
5 μέλλει γὰρ † πρὸc † ἡμᾶc βαίνειν
6 Φοῖβοc ἀκερcεκόμαc εὐχαίταc.

No. 26 *Notation* 6 Except for a solitary C over the second syllable of ἀκερcεκόμαc in **V** no. 26 has lost the notation altogether.

Text Title ῞Υμνοc εἰc ῞Ηλιον (6┐ **V**) **α** The initial letter is enlarged in **β** 1 Paragraphos in the left margin of **V**. In the margin of no. 26. 1 – no. 27. 10 appears in **VCN** a metrical scholion, which is omitted by **Ve**: cυζυγία κατ᾽ ἀντίθεcιν. ὁ ποὺc – ᴗ καὶ ᴗ –. γένοc διπλάcιον. ὁ ῥυθμὸc (καὶ ῥυθμὸc **C**) δωδεκάcημοc (δώδεκα **N**) **VCN** 5 πρὸc ἡμᾶc **α**, emended by Wilamowitz (1921), 604 (πρόccω) and Heitsch (1961), 25 (πορτ᾽ ἡμᾶc), but see Browning (1963), 159 δὲ πρὸc van Leeuwen (1904) on Ar. *Thesm.* 39 ff. 6 εὐχαίταc **VC**, εὐχέταc **γ**.

No. 27 MESOMEDES, Hymn to the Sun Second century AD

CC C C I C P C ΦΛC
7 Χιονοβλεφάρου πάτερ ᾿Αοῦc,

Φ MM M M I C Φ MIΛM
8 ῥοδόεccαν ὃc ἄντυγα πώλων

M IM I I P M IZΛ Z
9 πτανοῖc ὑπ᾿ ἴχνεccι διώκειc,

M Z M Z I M <I> I M Z I
10 χρυcέαιcιν ἀγαλλόμενοc κόμαιc

M I Z I M I PΦ C P PC
11 περὶ νῶτον ἀπείριτον οὐρανοῦ

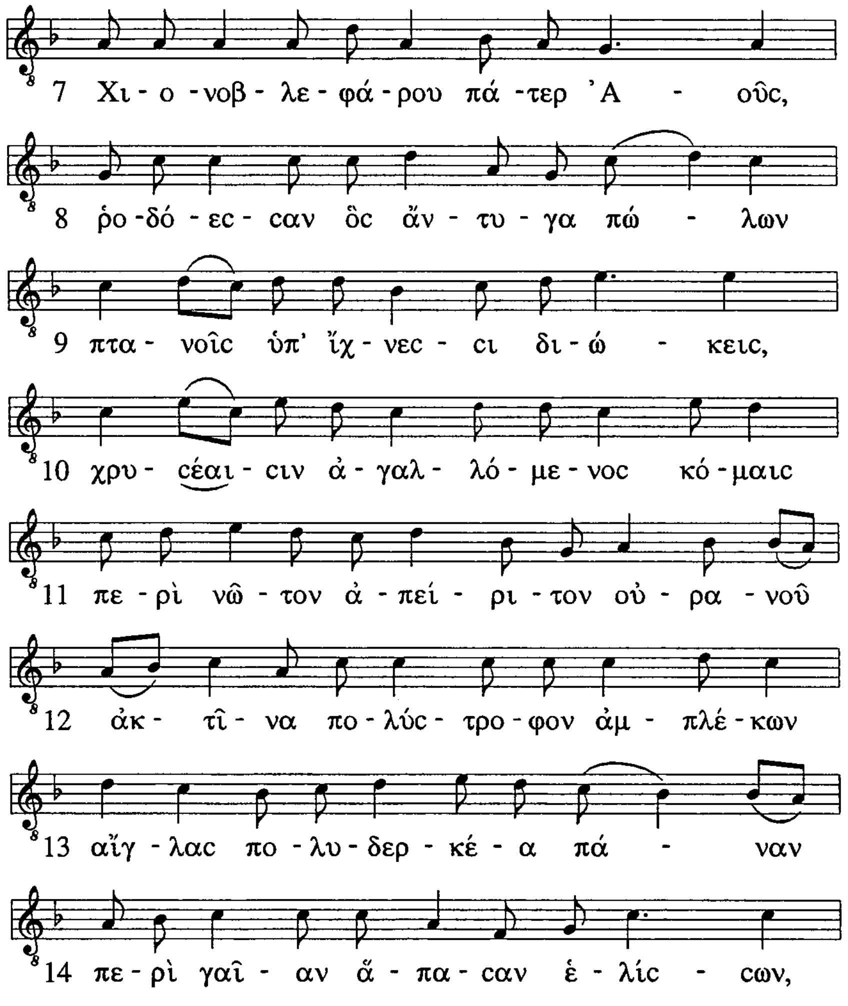
C P M C M M M M M I M
12 ἀκτῖνα πολύcτροφον ἀμπλέκων,

I⁻ M P M I ZI MPΛPC
13 αἴγλαc πολυδερκέα πάγαν

C P MM M C R Φ M M
14 περὶ γαῖαν ἅπαcαν ἑλίccων,

Notation 7 ΦΛC Pöhlmann (1970), 27, Φ/C **V**, ΦC **CN** 10 ⟨I⟩ Pöhlmann (1970), 26 13 MPΛPC Pöhlmann (1970), 27, MP/PC **N**.

Text 7 The initial letter is enlarged in **β** χιονοβλεφάρου **CNVe**, χιονοβλεφάρουc **V** 8 ῥοδόεccαν **VCVe**, ῥοδέεccαν **N** 9 ἴχνεccι **V**, ἴχνεcι **β** 11 οὐν̅ο̅ῦ **α** 13 πάγαν **α**, πάναν West 1 (1992), 10, παγάν Bellermann (1840), 27, 33 f.


7 Χι - ο - νοβ - λε - φά - ρου πά - τερ ᾿Α - οῦc,
8 ῥο - δό - εc - cαν ὃc ἄν - τυ - γα πώ - λων
9 πτα - νοῖc ὑπ᾿ ἴχ - νεc - cι δι - ώ - κειc,
10 χρυ - céαι - cιν ἀ - γαλ - λό - με - νοc κό - μαιc
11 πε - ρὶ νῶ - τον ἀ - πεί - ρι - τον οὐ - ρα - νοῦ
12 ἀκ - τῖ - να πο - λύc - τρο - φον ἀμ - πλέ - κων
13 αἴγ - λαc πο - λυ - δερ - κέ - α πά - ναν
14 πε - ρὶ γαῖ - αν ἅ - πα - cαν ἑ - λίc - cων,

Notation in **N**, **C** *and* **V**:

7**N** CC C C I C PC Φ C 8 Φ MM M M C Φ M ΛM
7**C** CC C C I C PC Φ C 8 Φ MM M M C Φ M ΛM
7**V** CC C C I C PC Φ/C 8 Φ MM M M I C Φ MI ΛM

9**N** M IM PM ZΛ Z 10 M ZM Z I M I M ZI
9**C** M IM I PM ZΛ Z 10
9**V** M IM I I PM IZΛ Z 10 M ZM Z I M I M ZI

11**N** M I ZI M I P Φ C PPC 12 CP M M M M M M I M
11**V** M I ZI M I P Φ C PPC 12 CP M C M M M M M M

13**N** I M P M I ZI MP/PC 14 C PM M M C ⟦A⟧ R Φ M M
13**V** I˜ M

M I Z Z Z Z E I E Z
15 ποταμοὶ δὲ cέθεν πυρὸc ἀμβρότου

P M I Z Z I M P <I> C
16 τίκτουcιν ἐπήρατον ἁμέραν.

C Φ C P M MM P P C
17 coὶ μὲν χορὸc εὔδιοc ἀcτέρων

M I M M I P M I Z Z
18 κατ᾽ Ὄλυμπον ἄνακτα χορεύει

Z Z M Z Z MZ I E Z
19 ἄνετον μέλοc αἰὲν ἀείδων

M IZ Z M I P Φ Z Z
20 Φοιβηΐδι τερπόμενοc λύραι.

C P M M M C P M M I Λ M
21 γλαυκὰ δὲ πάροιθε Cελάνα

I M I MM P M I Z Z
22 χρόνον ὥριον ἁγεμονεύει

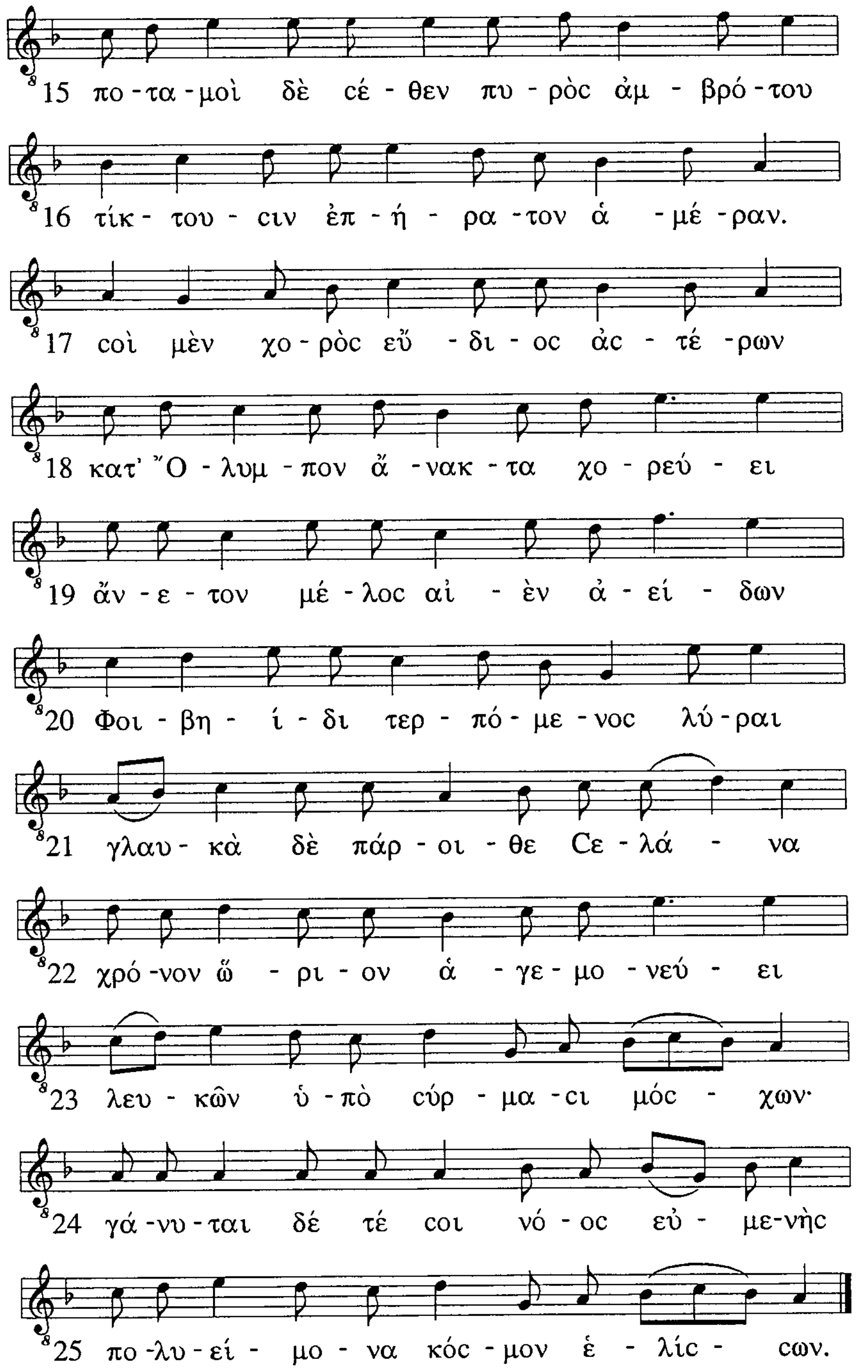
M I Z I M I Φ C PMP C
23 λευκῶν ὑπὸ cύρμαcι μόcχων·

C C C C C C PC PΦ P M
24 γάνυται δέ τέ coι νόοc εὐμενὴc

M I Z I M I Φ C PMPC
25 πολυείμονα κόcμον ἑλίccων.

Notation 16 PMI **N**, EMI West 1 (1992), 10 <I> Pöhlmann (1970), 26.

Text 16 ἐπήρατον **VCVe**, ἀπήρατον **N**, ἀκήρατον Wilamowitz (1921), 603 18 Ὄλυμπον Bellermann (1840), 26 f., οὔλυμπον **α** ἄνακτα **α**, cf. Bellermann (1840), 34 f. 20 Φοιβηΐδι **β**, φοιβήδι **V** λύρᾳ **N**, λύρη **VCVe** 21 γλαυκὰ **α**, κλαυκὰ **V** 22 ἀγεμονεύει **α**: ⟦α⟧ in red ink rectified by **N** 24 γάνυται Vaticanus gr. 1772, γάννυται **α** coι Bergk (1868), XCV, οἱ **α** πολυείμονα Monacensis 215, Parisinus 2532, πολυοίμονα **α**.


15 πο-τα-μοὶ δὲ cέ-θεν πυ-ρὸc ἀμ-βρό-του
16 τίκ-του-cιν ἐπ-ή-ρα-τον ἁ-μέ-ραν.
17 coὶ μὲν χο-ρὸc εὔ-δι-οc ἀc-τέ-ρων
18 κατ᾽ Ὄ-λυμ-πον ἄ-νακ-τα χο-ρεύ-ει
19 ἄν-ε-τον μέ-λοc αἰ-ὲν ἀ-εί-δων
20 Φοι-βη-ΐ-δι τερ-πό-με-νοc λύ-ραι
21 γλαυ-κὰ δὲ πάρ-οι-θε Cε-λά-να
22 χρό-νον ὥ-ρι-ον ἁ-γε-μο-νεύ-ει
23 λευ-κῶν ὑ-πὸ cύρ-μα-cι μόc-χων·
24 γά-νυ-ται δέ τέ coι νό-οc εὐ-με-νὴc
25 πο-λυ-εί-μο-να κόc-μον ἑ-λίc-cων.

No. 28 MESOMEDES, Hymn to Nemesis Second century AD

I M M M {M} I M M I C P M
1 Νέμεϲι πτερόεϲϲα βίου ῥοπά,

Φ M Z Z Z Z E Z I Z M
2 κυανῶπι θεά, θύγατερ Δίκαϲ,

M Ʊ Ʊ Ʊ Ʊ E Z E Λ Ʊ
3 ἃ κοῦφα φρυάγματα θνατῶν

Ʊ Ʊ M I Ʊ Z E I M <I> M
4 ἐπέχειϲ ἀδάμαντι χαλινῶι,

M M M M M M M M C M Φ
5 ἔχθουϲα δ' ὕβριν ὀλοὰν βροτῶν

P C Φ P P
6 μέλανα φθόνον ἐκτὸϲ ἐλαύνειϲ.

R Φ C Φ <I> I C Φ P M I
7 ὑπὸ ϲὸν τροχὸν ἄϲτατον ἀϲτιβῆ

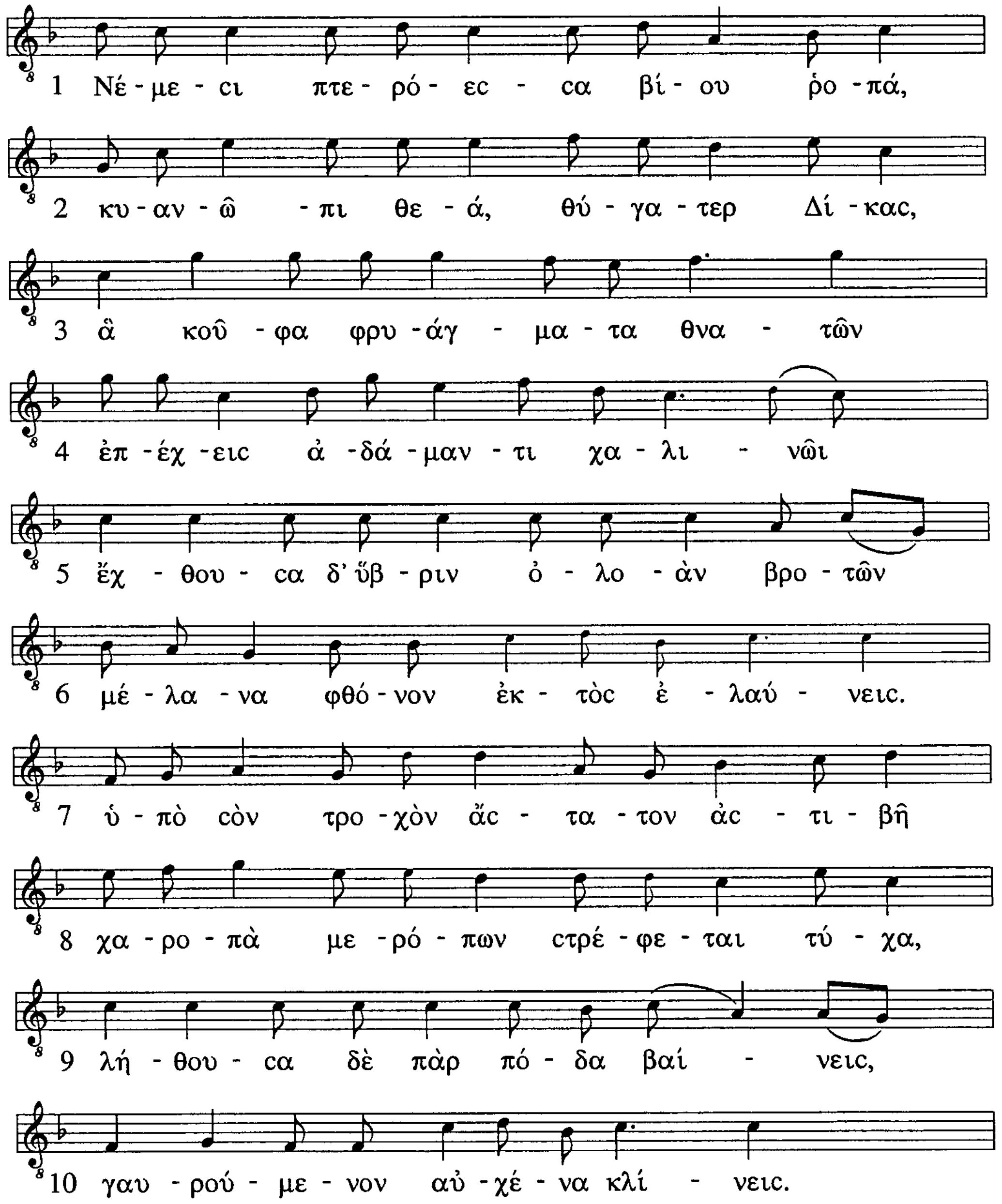
Z E Ʊ Z I I <I> M Z M
8 χαροπὰ μερόπων ϲτρέφεται τύχα,

M M M M M M P M C<Λ>C Φ
9 λήθουϲα δὲ πὰρ πόδα βαίνειϲ,

R Φ P P M I P M Λ M
10 γαυρούμενον αὐχένα κλίνειϲ.

Notation 1 {M} Pöhlmann (1970), 26 4 <I> West 1 (1992), 11 7 <I> Pöhlmann (1970), 26 9 MC<Λ>CΦ Pöhlmann (1970), 27, MCCΦ **N** 10 ΦPP **N**, ΦRR West 1 (1992), 11.

Text Title Ὕμνοϲ Νεμέϲεωϲ **V**, Ὕμνοϲ εἰϲ Νέμεϲιν **N**, Εἰϲ Νέμεϲιν **Ve**, no title **C** 1 The first letter is enlarged in **β**, paragraphos in the left margin of **V** 7–8 are quoted by Lyd. *Mens*. 184. 15 Wünsch, 9–11 by Synes. *Ep*. 95. 235b and *Suda* ν 163 (iii. 448. 5 Adler) 5 ἔχθουϲα **β**, ἔχουϲα **V** ὕβριν **α**, ὕβριν τ' Hermann (1877), 350 6 ἐκτὸϲ ἐλαύνειϲ without notation in **α**, lacking in **V** 7 ἀϲτιβῆ **β**, ἀϲτειβὴ **V**.


1 Νέ - με - ϲι πτε - ρό - εϲ - ϲα βί - ου ῥο - πά,
2 κυ - αν - ῶ - πι θε - ά, θύ - γα - τερ Δί - καϲ,
3 ἃ κοῦ - φα φρυ - άγ - μα - τα θνα - τῶν
4 ἐπ - έχ - ειϲ ἀ - δά - μαν - τι χα - λι - νῶι
5 ἔχ - θου - ϲα δ' ὕβ - ριν ὀ - λο - ὰν βρο - τῶν
6 μέ - λα - να φθό - νον ἐκ - τὸϲ ἐ - λαύ - νειϲ.
7 ὑ - πὸ ϲὸν τρο - χὸν ἄϲ - τα - τον ἀϲ - τι - βῆ
8 χα - ρο - πὰ με - ρό - πων ϲτρέ - φε - ται τύ - χα,
9 λή - θου - ϲα δὲ πὰρ πό - δα βαί - νειϲ,
10 γαυ - ρού - με - νον αὐ - χέ - να κλί - νειϲ.

R Φ P C Φ P PC P M I
11 ὑπὸ πῆχυν ἀεὶ βίοτον μετρεῖc,

Ʊ M I Z E I M {M} M Φ M
12 νεύειc δ᾽ὑπὸ κόλπον ὀφρῦν ἀεὶ

Φ M M M P C M I Λ I
13 ζυγὸν μετὰ χεῖρα κρατοῦcα.

E E E E Z Z I M I P
14 ἵληθι μάκαιρα δικαcπόλε

E E E Z Z I M I I Z M
15 Νέμεcι πτερόεccα βίου ῥοπά.

I M M MM I M C P M M
16 Νέμεcιν θεὸν ἄιδομεν ἀφθίταν,

Z M I Z E I I M Z M
17 Νίκην τανυcίπτερον ὀβρίμαν

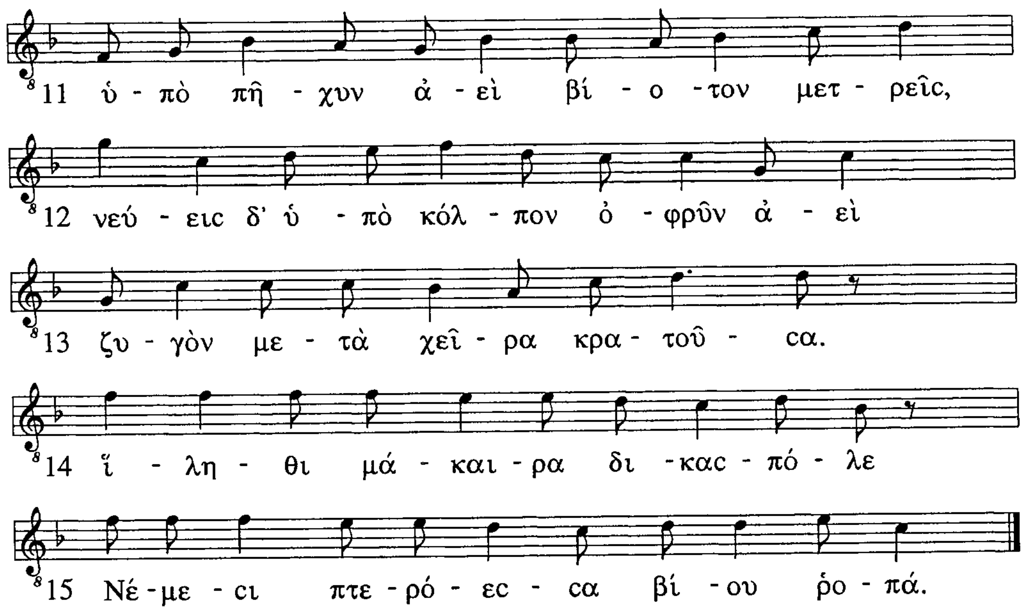
M M ƱƱ Ʊ Ʊ Z E Ʊ M
18 νημερτέα καὶ πάρεδρον Δίκαc,

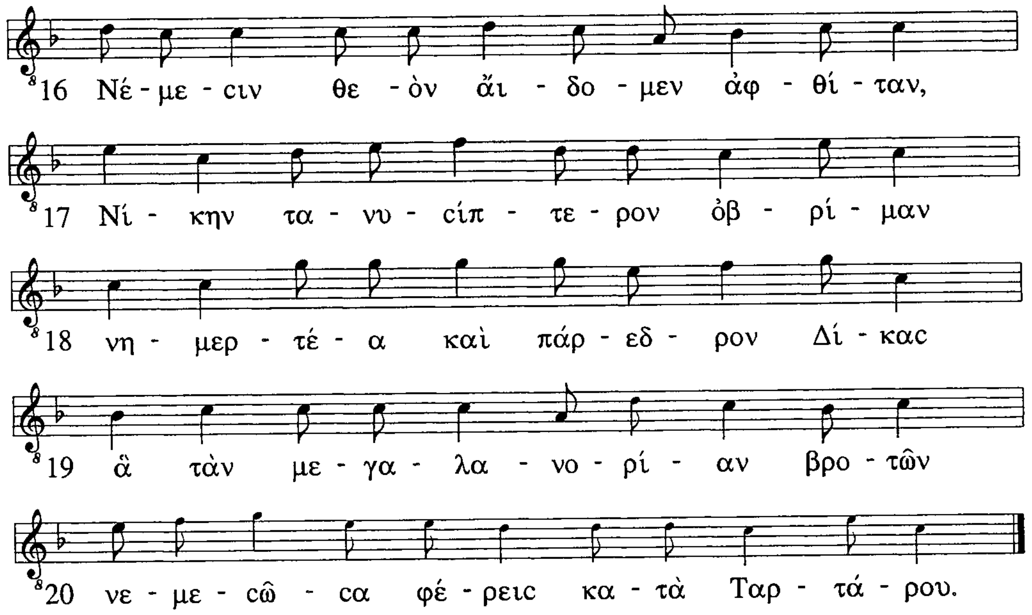
P M M M M C <I>M P M
19 ἃ τὰν μεγαλανορίαν βροτῶν

Z
20 νεμεcῶcα φέρειc κατὰ Ταρτάρου.

Notation 12 {M} Jan (1895), 470 19 <I> Pöhlmann (1970), 26.

Text 11 βίοτον μετρεῖc **α**, βιοτὰν κρατεῖc Synes., *Suda* 12 ὀφρῦν ἀεί Wilamowitz (1921), 604, ἀεὶ κάτω ὀφρῦν **α**, ὀφρῦν κάτω Bellermann (1840), 26, 44 13 ζυγὸν **α**, ζυγὸν εὖ Hermann (1877), 350, τὸ ζυγὸν West 1 (1992), 11 14 ἵληθι **C**, Wilamowitz (1921), 605, ἵλαθι **VNVe** 15 ῥοπὰ βίου West 1 (1992), 11 16 θεὸν ἄιδομεν ἀφθίταν Boivin in Parisinus 2458, ἄφθιτον Wilamowitz (1921), 604 f., θεῶν αἰδομένα (αἰδομέναν **C**) φθιτάν (φοιτᾶν **Ve**) **α** 17 ὀμβρίμαν **VNVe**, ὀβρίμαν **C** 18 Δίκαc **C**, Bellermann (1840), 49, Δίκαν **VNVe** 19 μεγαλανορίαν **β**, μεγάλαν ὀρίαν **V** 20 νεμεcῶcα φέρειc κατὰ Bellermann (1840), 48, φέρει Wilamowitz (1921), 604, Νεμέcεωc ἀφαιρεῖc καὶ **α**.


11 ὑ - πὸ πῆ - χυν ἀ - εὶ βί - ο -τον μετ - ρεῖc,
12 νεύ - ειc δ' ὑ - πὸ κόλ - πον ὀ - φρῦν ἀ - εὶ
13 ζυ - γὸν με - τὰ χεῖ - ρα κρα - τοῦ - cα.
14 ἵ - λη - θι μά - καιρα δι -καc - πό - λε
15 Νέ-με - cι πτε -ρό - εc - cα βί -ου ῥο - πά.


16 Νέ-με - cιν θε -ὸν ἄι - δο - μεν ἀφ - θί - ταν,
17 Νί - κην τα - νυ - cίπ - τε - ρον ὀβ - ρί - μαν
18 νη - μερ - τέ - α καὶ πάρ - εδ - ρον Δί - καc
19 ἃ τὰν με - γα - λα - νο - ρί - αν βρο - τῶν
20 νε - με - cῶ - cα φέ -ρειc κα - τὰ Ταρ - τά - ρου.

Nos. 29–31 MESOMEDES: Hymns to Isis, Physis and Sundial Second century AD

No. 29 MESOMEDES: Hymn to Isis

The manuscript (Ottobonianus Graecus 59) exhibits before the "Hymn to Isis" of Mesomedes[1] a scholion, which explains the poem's metre (paeonic dimeters) correctly and gives testimony for a lost setting to music in the Hypolydian key:

ἡ cυζυγία πυρρίχιος καὶ ἴαμβος. γένη δύο, ἴαμβος διπλάσιον καὶ πυρρίχιος ἴсον. ὁ ῥυθμὸς δεκάcημος. ὑπολύδιος ὁ τρόπος.

No. 30 MESOMEDES: Hymn to Physis

The Ottobonianus exhibits before the "Hymn to Physis" of Mesomedes[2] a scholion, which gives testimony for a lost setting to music in the Lydian key, but does not fit the poem's metre. Perhaps it belonged to the "Poem on the Swan":[3]

Πυθαγόρου. ὁ ποὺς προκελευcματικός. ὁ ῥυθμὸς ὀκτάcημος. ὁ τρόπος λύδιος.

No. 31 MESOMEDES: Hymn to the Sundial

In the Ottobonianus appears a scholion to the first "Hymn to the Sundial",[4] which does not fit the metre of the poem. It is nearly identical with a scholion to no. 26:

cυζυγία κατ᾽ ἀντίθεcιν. ὁ ποὺς –∪ καὶ ∪–. γένος διπλάcιον. ὁ ῥυθμὸς δωδεκάcημος,

which does not make sense there either, but helps to correct no. 31. Both scholia belong to poems in choriambic dimeters; the scholion to no. 31 gives testimony for a lost setting in the Lydian key:

ἡ cυζυγία τροχαίου καὶ ἰάμβου.[5] ὁ τρόπος λύδιος. ὁ ῥυθμὸς δωδεκάcημος· γένος διπλάcιον.

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[1] Heitsch (1961), no. 5; cf. below p. 113.

[2] Heitsch (1961), no. 4; cf. below p. 113.

[3] Heitsch (1961), no. 10.

[4] Heitsch (1961), no. 7; cf. below p. 113 f.

[5] ἰάμβου καὶ τροχαίου in the Ottobonianus.

Nos. 24–31 MESOMEDES Second century AD

Table of manuscripts

V Venetus Marcianus app. cl. VI 10 (1300), no. 1 Jan (1895), no. 273 Mathiesen (1988), 13th–14th century. **V** exhibits on f. 205v–206r Hymns of Mesomedes (nos. 24–8) with notation as far as no. 27. 13; see pl. 3–4.

C Parisinus Coislinianus graecus 173, no. 138 Jan (1895), no. 103 Mathiesen (1988), 15th century. **C** exhibits on f. 222v Hymns of Mesomedes (nos. 24–8) with notation as far as 27. 9; see pl. 5.

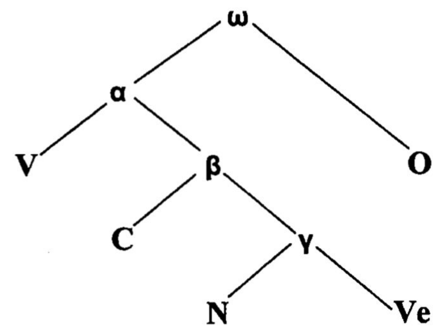
N Neapolitanus graecus 262 (III C 4), no. 78 Jan (1895), no. 203 Mathiesen (1988), 14th–15th century. **N** exhibits on f. 82v–83r Hymns of Mesomedes (nos. 24–8) with notation as far as no. 28. 20; see pl. 6–7.

Ve Venetus Marcianus graecus 318 (994), no. 182 Jan (1895), no. 262 Mathiesen (1988), 14th century. **Ve** exhibits f. 228r Hymns of Mesomedes (nos. 24–8) without notation; see pl. 8.

For the copies of **V**, **N**, **Ve** see Heitsch (1959), 36, 43 and Pöhlmann (1994), 187–9.

O Ottobonianus graecus 59, 13th–14th century. **O** exhibits on f. 31v–33r the hymn to Hygieia of Ariphron, and eight poems of Mesomedes not contained in **V**, **C**, **N** and **Ve**; see Heitsch (1961), 26–31 nos. 4–11. These poems lack notation, but give testimonies for lost melodies (nos. 29–31). Two further poems of Mesomedes are transmitted as *AP* 14. 63 and 16. 323, see Heitsch (1961), 31 f. nos. 12–13.

Filiation of manuscripts



From the Cretan Mesomedes, court musician to Hadrian,[1] we have altogether fourteen or fifteen poems. Two had always been known from the Greek Anthology,[2] and these are the only two transmitted under the poet's name. Five more (one of which, however, may be of different authorship) are preserved, with musical notation of the ancient type, in a series of manuscripts dating from between the thirteenth and seventeenth centuries: invocations of the Muse, of Calliope and Apollo, and of Phoibos, and hymns to Helios and Nemesis (nos. 24–8).[3]

Ancient quotations from the Nemesis hymn[4] virtually guaranteed Mesomedes' authorship for these pieces too. Finally, in 1903 K. Horna discovered in a late thirteenth-century manuscript (**O**) eight more poems, whose metre and style favoured ascription to Mesomedes.[5] Although they lack musical notation, accompanying scholia show that some of them, at least, had been set to music (nos. 29–31). Horna himself argued that they derived from the same corpus as the other four invocations and hymns.

Work on the history of the transmission, initiated by F. Bellermann and carried on by C. von Jan, Th. Reinach, and Horna, reached something of a culmination in the article by E. Heitsch.[6] He concluded that for the text of the poems there were three primary manuscript sources (**V**, **N**, **Ve**), from which all other known manuscripts were derived. The transmission of the musical notation, however, is not so clear. **Ve** has none; **V** has it only as far as no. 27. 13, whereas **N** has it throughout nos. 24–8 apart from two gaps in 28. 6 and 20. There are clear errors of transmission in the notation, and where we rely on **N** alone it is difficult to remedy them. It seemed desirable, therefore, to enlarge the manuscript basis.

The Mesomedes settings are transmitted together with a late musical treatise by one Dionysius, which in the manuscripts follows on, without a new title, from the treatise of Bacchius. An examination of all the manuscripts listed by Jan and Th. J. Mathiesen[7] as containing only Bacchius disclosed, *inter alia*, that a lost manuscript in Wolfenbüttel, last heard of in an eighteenth-century catalogue, had contained *hymni Graeci cum antiquis notis musicis Graecorum*.[8] A sixteenth-century Vaticanus[9] contains, like **Ve**, the four hymns without notation or verse-division, and instead of Dionysius it has, again like **Ve**, a Pythagorean text, of which a divergent recension is known from Photius.[10] Comparison of readings shows the Vaticanus to be a direct

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[1] Dio Cassius 77. 13. 7; *Historia Augusta*, Pius 7. 8; *Suda* μ 668 (iii. 367. 8 Adler); West 2 (1992), 383 f.

[2] *AP* 14. 63; 16. 323; Heitsch (1961), 31 f., nos. 12–13.

[3] Ed. princeps: Galilei (1602), 97, who learned of the poems from Girolamo Mei; cf. Palisca (1960), 156, 159–63; Galilei (1602), 96 f., 154. Galilei was followed by Fell (1672), 49–69, and Burette (1731), 284–308, who used cod. Paris. gr. 2532 (no. 126 Jan, 95 Mathiesen). Bellermann (1840), 20–4, reviews the other early editions. The poetic texts (without the music) are also in Bergk (1868); Wilamowitz (1921); Heitsch (1961).

[4] See above in the apparatus to no. 28.

[5] The manuscript contains on f. 31^{v}–33^{r}, under the general heading παρεξεβλήθηcαν ἀπὸ τῆc Μουcικῆc, the following items: (Ariphron), *Hymn to Hygieia*; (Mesomedes) 1. *To Physis*, 2. *To Isis*, 3. *To the Adriatic*, 4. *On a Sundial I*, 5. *On a Sundial II*, 6. *Ecphrasis of a Sponge*, 7. *On a Swan*, 8. *On a Mosquito*. Editions: Lambros (1906); Wilamowitz (1921), 595–607; Horna (1928); Heitsch (1961). Photos: Merkelbach–van Thiel (1965), 25–8.

[6] Bellermann (1840); Jan (1890); Reinach 1 (1896); Horna (1928); Heitsch (1959).

[7] Jan (1895), xi–xciii; Mathiesen (1988). The manuscripts of writers on music are cited with Jan's and Mathiesen's catalogue numbers.

[8] Heinemann (1913) on Gudianus 103.

[9] Vat. gr. 1772, f. 181^{r}–182^{r} (158c Jan, 232 Mathiesen).

[10] Phot. *Bibl.* 249, where the piece is labelled as a *Life of Pythagoras*; see Immisch (1919). **Ve** and the Vaticanus are abridged in comparison with Photius, but offer an extra page of text at the end.

copy of **Ve**.[1] Mathiesen has pointed to a fifteenth-century manuscript in Salamanca which is a descendant of **V**.[2] It is noteworthy that the copyists of some later manuscripts leave a blank page following the treatise of Dionysius where the hymns would be expected, perhaps in the hope of finding a better or more complete exemplar for the difficult notation.

Only a fourteenth-century Paris manuscript with notation (**C**) turned out to be independent of **V**, **N**, and **Ve**.[3] It does not persevere as far with the notation as do **V** and **N**, abandoning it at 27. 9, but up to that point it strengthens the basis for criticism. It also helps us to form a clearer idea of the page layout, scholia, and headings of the common archetype of **V**, **C**, **N**, and **Ve**.

C has the hymns on a verso page which had been left blank between Dionysius and Bryennius. They were evidently added later, as the scribe did not have enough space for them, and had to crowd lines 11–20 of no. 28 into four columns at the foot of the page. The rest is written in two columns, to be read straight across, as also in **V** and **N**.

At the top stands the heading contaminated with a scholion, as known also from **V**, **N**, and **Ve**, Εἰc Μοῦcαν ἴαμβοc βακχεῖοc; to the scholion belongs also the word cπονδεῖοc, which has got in among the notes to no. 24. 2. Each new poem begins with ecthesis and enlarged initial. Nos. 25 and 27 receive this treatment despite having no headings of their own in the tradition. As these two poems occupy respectively only four and a half and twelve and a half lines, the right-hand half of the last line in each case remains empty, and is used for the heading of the next poem. In the left margin, level with 25. 9–27. 7, there stands another scholion, again known from the other manuscripts.

N has the same layout in detail, except that it fails to mark Καλλιόπεια (25) as the start of a new poem. **V**, on the other hand, diverges in a way that was to have significant consequences: the empty half-line at the end of no. 25 was used for the first line of no. 26, so that in what followed the allocation of verses to columns was reversed. The heading was shifted into the space between the columns, while the scholion was split in two and accommodated in the middle and the right-hand margin. Consequently incipits had to be indicated by paragraphoi (nos. 26 and 28) or by ἄλλωc (no. 25). In the manuscripts copied from **V** the sequence was not correctly followed, and the order of verses became more and more confused.

Ve, which has no notation and is written continously like prose, marks verse-end throughout with : and the end of a poem with :+ (after 25. 9), :· (after 26. 6), :– (after 27. 25 and 28. 20). Three poems, nos. 24, 26, and 28, begin with enlarged initials. The headings to nos. 24 and 26 are incorporated in the running text, while that to no. 28 is added in the right margin; the second scholion is omitted.

The apographa of **V**, **N**, and **Ve** and the early editions call for no further discussion following the studies of Heitsch and E. Pöhlmann.[4] It remains to ask in what relationship **V**, **C**, **N**, and **Ve** stand to one another. Heitsch derived **V**, **N**, and **Ve** directly from an archetype **α**.[1] However, such a simple construction is no longer tenable. It is true that all four manuscripts are independent of one another and dependent upon a common source, as the various separative and conjunctive errors recorded in the apparatus show. It can further be inferred that already in the archetype (*a*) the heading of the invocation to the Muse was contaminated with metrical glosses, (*b*) there were three headings but five incipits, and (*c*) the second half of no. 28. 6 had no notation, as in **N**, which explains why **V** omitted the words too.

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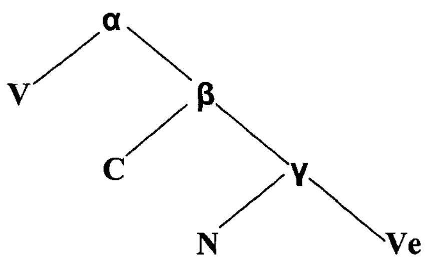
[1] It has all of **Ve**'s distinctive variants (no. 28, title Εἰc Νέμεcιν; 16 φοιτᾶν), and the additional errors 27. 7 χιονοβεφάρου, 9 ἐπ' ἴχνεcι. At 27. 24 it makes the easy correction γάνυται for γάννυται.

[2] Salmanticensis Univ. gr. 2748 (63 Mathiesen). The other eight manuscripts presented as new by Mathiesen (1981), 15 f., 21 f., were already known to Heitsch (1959), 36–43, who had eliminated them as apographa of **V**. The Salmanticensis is also to be eliminated, as it derives from **V** through Mathiesen's no. 95, as may be seen from the form given to the Nemesis Hymn in this group, ὕμνοc Νεμέcεωc instead of ὕμνοc εἰc Νέμεcιν, and from the confusion in line-sequence that stems from **V** (see below).

[3] Paris. Coislinianus gr. 173, f. 222^{v} (138 Jan, 103 Mathiesen).

[4] Heitsch (1959), 36; Pöhlmann (1994), 187–9.

Four passages, however, show that these manuscripts were not direct copies from **α**. At 26. 6 **V C** have the correct εὐχαίτας, while **N Ve** have the unmetrical εὐχέτας. It is in accord with this that **V C** correctly indicate a new incipit at 25. 5 with ἄλλως or ecthesis and enlarged initial, while **N Ve** run the two poems into one. **N Ve**, therefore, have a common exemplar (γ). Further, **V** correctly has in the margin at 24. 1 the metrical gloss ἴαμβος, which finds its logical continuation in the σπονδεῖος ἴαμβος βακχεῖος at 24. 2, whereas **C N Ve** omit the first ἴαμβος. And at 27. 9 **V** alone has the metrically necessary ἴχνεσσι, while **C N Ve** have ἴχνεσι. These shared errors in **C N Ve** point to a further hyparchetype (**β**). This gives us the stemma:



As already mentioned, the Mesomedes hymns are transmitted as an appendage to the treatises of Dionysius and Bacchius. Chr. Tertzis has investigated the 23 manuscripts in which Dionysius is transmitted and arrived at the same stemma for **V**, **C**, and **N**.[2] He left **Ve** out of consideration, as it contains only Bacchius and not Dionysius.

Further confirmation of the stemma for Mesomedes is given by the musical notation. If one compares the variants for the notation in **V**, **C**, and **N** given in the apparatus as far as 27. 13, it appears that **C** and **N** often share errors against **V**.[3] But **V** is also on occasion in error against **C N**. There are many omissions, sometimes explicable as haplographies (24. 1; 25. 6), but more often to be accounted for otherwise:

In **α** accents and breathings had to share the space above the line with the note-symbols, as can be seen most clearly from **V**. Hence it is understandable that in six cases the acute accent has

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[1] Heitsch (1959), 41–3.

[2] Tertzis (to be published).

[3] A check of **V** and its apographa disclosed that Jan (1895), 462, 464, and (1899), 48, 50, overlooked a note I over 27. 8 ἄντυγα and a note C over 27. 12 ἀκτῖνα. He had relegated a further note I to the apparatus (at 27. 9 ἴχνεσσι). **C** cancels a sixth C at 25. 6; **N** cancels an A at 27. 14 and adds the correct R above, corrects a wrongly-made C in the margin at 28. 16, and uses square and rounded forms of the note Ʊ side by side (at 28. 18 δίκας).

displaced the note I.[1] Three times this note seems simply to have been overlooked.[2] So where there are notes missing over acute syllables in the portion transmitted only in **N**, it will be reasonable to supply the note I, if this results in a plausible melodic line; in other cases the preceding note may be repeated.

Further, comparison of the manuscripts (see the plates) shows that where there are gaps, **N** is especially prone to arbitrary redistribution of the notes. Thus **V** and its apographa **P** and **Mo**[3]
I C Φ M CP M C C Φ M C P M
give at 27. 8 ἄντυγα πώ and at 27. 12 ἀ κ τῖ να, while **N** has ἄντυγα and ἀ κ τῖ να, in both cases producing a clash of melody and accent. But such errors may already have been present in **α**.

Taking all the clearly identified note-symbols together, we obtain a segment of the Lydian scale: ⌉ (*e*), R (*f*), Φ (*g*), C (*a*), P (*b♭*), M (*c′*), I (*d′*), Z (*e′*), E (*f′*), Ʊ (*g′*), to which is added an exharmonic N (*c#′*) from the chromatic Hypolydian scale.

The note R has led to a series of variants in the manuscripts. Thus at 25. 6 **V C** have R and **N** has A, while in the next line **V** has R and **C N** have P. At 27. 14 **N** has again misread R as A but corrected the error in the margin. After this point the scribe has understood the sign, rendering it correctly at 28. 7, 10, and 11.

The mistakes are divided between **β** and **N**, as the R is always correct in **V**. Its misreading as P in **β** at 25. 7 lends colour to M. L. West's conjecture at 28. 10, where he eliminates a clash between melody and accent by reading R Φ R R instead of R Φ P P.[4]

At four places (24. 3 f.; 25. 6) Jan read in **V** the note H (*e♭′*), where **N** gave N (*c#′*).[5] **C** agrees with **N** in all four places in giving N, so this was evidently the reading of **β**. The supposed H in **V** is fact nothing but a cursive N, of the kind that **V** uses in final position in the text. This interpretation, already considered by Jan, was taken up by Reinach,[6] who explained the N in the invocation to the Muse as an exharmonic note analogous to the O (*b*) in Athenaios' Paean.[7] This led him to question Mesomedes' authorship of the poem and to date it earlier, nearer in time to the Delphic hymn.[8]

A variant at 25. 8 calls for emendation against all the manuscripts. **V C** give a clearly legible Γ (*f*), while **N** gives the same sign with breaks in the crossbar. Γ would belong in the Lydian Synemmenon tetrachord, which is not otherwise represented; it makes no sense, coming as it does just after the regular E (*f′*) and Z (*e′*) of the Diezeugmenon tetrachord. It was already emended to I (*d′*) by Reinach.[9] The error perhaps goes back to I˘, as written at 24.3 (**N C**) and 27. 13 (**V**), i.e. I plus diseme.

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[1] 25. 8 Παιάν; 27. 8 ἄντυγα, πώλων, 9 ἴχνεσσι, διώκεις, 12 ἀμπλέκων. The confusion of notes and accents shows that the same colour of ink was used in **α** for both. Bellermann (1840), 62 already reckoned with such confusions.

[2] 24. 2 ἐμῆς; 25. 9 εὐμενεῖς; 27. 9 ὑπ᾽.

[3] Paris. gr. 2532 (126 Jan, 95 Mathiesen); Monac. gr. 215 (69 Jan, 20 Mathiesen); facsimiles in Bellermann (1840), pl. I–II.

[4] West 1 (1992), 11.

[5] Jan (1895), 458.

[6] Reinach 1 (1896), 17.

[7] See p. 73. Gombosi (1939), 132 f., derived these four Ns or Hs from badly written M in the archetype.

[8] Reinach 1 (1896), 19, 22.

[9] Reinach 1 (1896), 16 f.

The numerous omissions of notes fall into different categories. At 28. 7 τροχόν and 19 μεγαλανορίαν the note is missing on the accented syllable; supplementing I yields a melodic line in accord with the accents.[1] At 28. 8 the acute belonging to cτρέφεται is displaced over the φ, probably resulting in the loss of an I over φε.

I M IM I M IM MP C

At 27. 10 **V** gives ἀγαλλόμενος and **N** ἀγαλλόμενοc, while at 27. 16 **N** has -τον ἁμέραν. In both cases an I has been lost above the accented syllable and the remaining notes have moved

I M <I>I M M P<I> C

out of place. The melody can be restored by emending ἀγαλλόμενος and -τον ἁμέραν.

On the other hand, at 27. 15 cέθεν and 28. 8 μερόπων, where again the accented syllables are bereft of notes, the insertion of I is not appropriate, as it would put the accented syllable on a lower note than the surrounding unaccented ones. In these instances it is better to assume a haplography and repeat the preceding note. Loss of I may again have occurred at 28. 4, where the transmitted notes on χαλινῶι put the first, unaccented syllable a tone higher than the other two; the difficulty is resolved by reading I M <I> M or I M <II> M.[2]

In other places we have nothing to guide us. At 24. 2 three notes are missing, no doubt displaced by the gloss cπονδεῖος. No. 26 has no notes at all apart from an isolated C in **V**, it may be that these verses, which form a separate prooimion, were never set to music. At 28. 6 the second half of the line lacks notation in **C N** and is omitted altogether in **V**. Bellermann skilfully filled the lacuna from the melody of line 10.[3]

Finally, 28. 20 has lost all its notes except for a Z over the initial syllable. Here we can turn to the melody of line 8, which also begins with a Z and (perhaps not coincidentally) has the same pattern of accents as line 20. The reprise effect that this supplementation would produce is attested in no. 27, where again the last line (25) repeats the melody of a previous line (23) without clashing with the word accents.

At 28. 12 (where the verse text itself is corrupt) Jan diagnosed a dittography, and deleted one of the three M's above ὀφρῦν.[4] A similar treatment is called for at 28. 1, where, if one works back from the end of the line and allocates the note symbols according to the accents, there are five notes on πτερόεςςα. By deleting the second M, melody, metre, and accent are brought back into harmony.

The rhythmical notation in the manuscripts is, compared with that of contemporary musical papyri, very sparse. But this is not surprising in view of the metrical simplicity of the poems.[5] Occasionally we find disemes (24. 3 Z⁻ and I⁻; 25. 8 and 27. 13 I⁻), but only the Z⁻, drawing attention to a long anceps, seems to serve a useful purpose. No doubt other disemes have disappeared, as the manuscript variants indicate. But we cannot assume that originally every long note was so signalled.

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[1] Cf. above, pp. 108 f.

[2] West 1 (1992), 11.

[3] Bellermann (1840), 82.

[4] Jan (1895), 470.

[5] No. 24 consists of two iambic tetrameters with catalexis; no. 25 of two hexameters with a lekythion as clausula; no. 26 of spondaic heptasyllables, such as Mesomedes uses also in his hymn to Physis (Heitsch (1961), 26 no. 4), closing with a dactylic tetrameter; nos. 27 and 28 of 'apokrota' (⏑⏑ – ⏑ ⏑ – ⏑ ⏑ – ⏑ –) in irregular alternation with their catalectic equivalent, the paroemiac (⏑⏑ – ⏑ ⏑ – ⏑ ⏑ – –). For this metre see West (1982), 172 f.

Of greater significance is the leimma found six times in nos. 27–8 (27. 8, 9, 21; 28. 3, 10, 13). **V** and **C**, so far as they carry notation, agree with **N** on this matter. The leimma occurs only in catalectic lines and stands between the penultimate and the final note or note-group, taking the place of the suppressed short syllable. As the papyri have shown, the function of the leimma is to add length to the preceding note. It indicates that the clausula – ⏑ – (♩ ♪ ♩) becomes ⏗ – (♩. ♩). This is confirmed by 27. 23 and 25, catalectic lines in which the penultimate syllable is furnished with three notes (♪ ♪ ♪) and must have triseme value.

There are several catalectic verses in these two poems where the leimma is missing (27. 7, 13, 14, 18, 19, 22; 28. 4, 9).[1] This is not surprising. A scribe who took the leimma as a note-symbol Λ would attribute it to the final syllable of the catalectic line, and in fact, as R. Wagner has shown, where the leimma is preserved, it usually appears in the manuscripts together with the following note above the last syllable.[2] This does not, however, as Wagner supposed, mean that it belonged rhythmically to that syllable.

In two passages the trace of a vanished leimma is perhaps to be recognized in an anomalous acute accent. At 27. 7 **C N** give ἀοῦc with the notes Φ C, where we expect Φ Λ C, but **V** gives αουc (no breathing or accent) with the notes Φ / C. Apparently the copyist took the /, relic of a Λ, as an accent belonging to ἀουc, so he added no other.

Six lines further on, all manuscripts give πάγαν, and **N**, the only one still providing notation, furnishes the word with the notes M P P C, where we expect M P Λ P C. The paroxytone accent is in accord with the melody, which fits West's πάναν, but not Bellermann's παγάν.[3] Here too, possibly, it is the remnant of a leimma.

R. P. Winnington-Ingram suggested that the catalectic lines without a leimma had a different rhythmic value, namely – ⏗ (♩ ♩.); this would account for the apparent inconsistency in the use of the leimma.[4] But in the outstanding passages we should probably assume the loss of a leimma and interpret the rhythm accordingly, particularly in view of the fact that they all fall in the portion where the notation is transmitted only in **N**.

How are we to understand the catalectic lines in which the penultimate syllable is given two notes? Where a leimma (or a trace of it) is preserved, it always comes after the second note, never between the two (27. 8, 13, 21). The implication is that the rhythm is ♪‿♩, giving a syncopated effect in relation to the underlying metre, i.e. ♪‿♩ ♩ instead of the paradigm ♩ ♪ ♩.[5] This is unexpected, but it is clearly what the notation indicates, and that must be our guide. The same must be assumed where no leimma survives (28. 9).

There remain three cases of catalexis without leimma in no. 24 (lines 2 and 4), no. 25 (line 9). Here the suppressed short is allocated to the final syllable, which in the second instance is actually set to two notes.

The three titles that stood in the archetype **α** are due to a copyist who thought he had three hymns to deal with, one to the Muse, one to Helios, and one to Nemesis, and who derived the titles from the texts. The page layout, however, implies five poems: three prooimia (no. 24 to the Muse, no. 25 to Calliope and Apollo, no. 26 to Phoibos), followed by two hymns (no. 27 to Helios, no. 28 to Nemesis). The supposed 'Hymn to the Muse' (nos. 24 + 25) cannot be a single piece. G. Hermann and Wilamowitz[1] saw that the iambics of no. 24 with their Ionic vocalization must be separated from the Doric hexameters + lekythion of no. 25, making two independent prooimia, just as **V** indicates with its ἄλλωc and **C** with its ecthesis and enlarged initial. The page layout, then, is older than the headings. It follows that at 27. 7 too the ecthesis and initials in **C N** and the punctuation :· in **Ve**, as well as the change of metre and the re-start of notation, must be taken as evidence for the beginning of a new poem.

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[1] At 28. 6 and 20 the notation is partly or wholly lost.

[2] Wagner (1921), 287–9.

[3] West 1 (1992), 10; Bellermann (1840), 27, 33 f.

[4] Winnington-Ingram (1955), 82 f.

[5] West 2 (1992), 306. Pöhlmann (1970), 27, took the contrary view.

Wilamowitz clearly recognized the separate status of 26. 1–6: 'Die ersten sechs Verse haben keine Noten; sie können ein altes Proömium sein oder bilden doch ein solches nach.'[2] The content alone would not compel us to make the division, even though the prooimion speaks of Phoibos, while the hymn is to Helios; Apollo and Helios were, after all, identified at an early date.[3] But Heitsch, without actually separating the poems, made clear the linguistic break after no. 26.[4] The manuscript evidence now impels us to treat no. 26 as an independent prooimion, and to group it with the two preceding prooimia. P. Maas went a step beyond Wilamowitz, conjecturing that all three prooimia were older than Mesomedes, though he allowed that the musical settings of the first two might be by the Cretan.[5]

Further evidence for the history of the text is to be found in the metrical-musical scholia, which must have stood in **α** and which have parallels in **O**, the branch of the Mesomedes tradition that lacks musical notation. Bellermann was able to reconstruct a scholion which explained the purely iambic line 24. 1 as ἴαμβοc and the catalectic line 24. 2 as cπονδεῖοc ἴαμβοc βακχεῖοc, but which came to be divided between the heading and the line of notation.[6] It is due to a glossator who, instead of reckoning with iambic metra and catalexis, divided lines mechanically into feet.

Another, longer scholion, which makes no sense in its present position, uses a different terminology: cυζυγία κατ᾽ ἀντίθεcιν. ὁ ποὺc – ∪ καὶ ∪ –. γένοc διπλάcιον. ὁ ῥυθμὸc δωδεκάcημοc. **C N** have it in the left margin, level with 25. 9–27. 7; **V** divides it between the right margin and the intercolumnium; **Ve** leaves it out. Bellermann, W. Christ, Jan, and Wilamowitz tried in vain to reconcile it with the iambics or hexameters of the prooimia to the Muse.[7] Reinach and Horna realized that the copyist of **α** meant the scholion to refer to the beginning of the hymn to Helios (27. 7).[8] But it does not make sense there either. In itself it is perfectly intelligible: it describes a choriambic dimeter in the terminology of Aristoxenus or Aristides Quintilianus.[9] The verse comprises twelve time-units. Each choriamb consists, as its name implies, of a χορεῖοc, i.e. a trochee, and an iambus, two antithetical components, each of them assigned to the γένοc διπλάcιον, that is, having their arsis and thesis in the proportion 1 : 2.

That the scholiast understood the Aristoxenian terminology in this sense can be confirmed from the noteless branch of the Mesomedes tradition. There, in the codex Ottobonianus, three further poems carry scholia of the same type. In addition the notation-keys of the (lost) musical settings are stated.

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[1] Hermann (1877), 343; Wilamowitz (1903), 97.

[2] Wilamowitz (1921), 604.

[3] E.g. Oinopides VS 41.7; Diggle (1970), 147.

[4] Heitsch (1960), 145.

[5] Maas (1933), 156 with nn. 1–2.

[6] Bellermann (1840), 53 f.

[7] Bellermann (1840), 54; Christ (1874), 600; Jan (1895), 461 f.; Wilamowitz (1903), 97 n. 2.

[8] Reinach 1 (1896), 13 n. 1; Horna (1928), 21.

[9] Aristox. *Harm.* 2. 34 and Arist. Quint. 1. 52 f.; Aristox. *Rhythm.* pp. 14–16 Pearson and Arist. Quint. 1. 34 ff.

The scholion to the Isis hymn (no. 29) is perfectly in place. The specification of ten-unit lines composed from a pyrrich and an iambus corresponds exactly to the metre of the hymn, actually paeonic dimeters with their various resolutions and contractions. What Aristoxenus treated as a coherent entity, the paean ($\overline{\cup\cup}\ \cup\ \overline{\cup\cup}$), is here analysed as a compound, pyrrhich + iambus, much as in Bacchius, who divided it into a trochee and a pyrrhich.[1] The identification of the key as Hypolydian shows that the piece was once transmitted with notation.

As for the scholion to the Physis hymn (no. 30), Horna had difficulty in reconciling it with the spondaic metre of the poem. He argued that προκελευcματικόc here referred not to a measure consisting of four shorts, as usual, but to its doubling, four longs, equivalent to two spondees, the long syllable constituting the basic time-unit.[2] The poem is in fact composed in lines of seven long syllables with no resolution. If the scholiast describes the rhythm as ὀκτάcημοc, he may, Horna supposes, have found a diseme leimma at the end of the verse in his notated exemplar and counted it in. But it is more plausible to refer the metrical part of the scholion to the poem *On a Swan* (no. 10 Heitsch), or to a lost poem in the same metre, namely anapaestic monometers with much resolution, often giving proceleusmatics.

The first of the two poems *On a Sundial* comes with a lengthy scholion that falls into two halves. The first part, printed above as no. 31, would, if the sequence iambus–trochee were taken at face value, point to antispastic dimeters, an ancient form of analysis of the glyconic or related measures.[3] If the order is reversed, we get the same choriambic dimeters as in the scholion to the Helios hymn. But the poem in question contains neither antispasts nor choriambs; it is in the same metre as the hymns to Helios and Nemesis. The two scholia have evidently got into the wrong places. They probably referred to two lost poems.

There remains the second and longer part of the scholion to the sundial poem. It appears to be a later gloss which vainly attempts to interpret the misplaced first part and reconcile it with the hendecasyllabic metre of the poem: ὡc μὲν πρὸc ὅλον τὸν cτίχον ὁ ῥυθμὸc δωδεκάcημοc· ἕνδεκα γάρ ἐcτι cυλλαβῶν, ἡ δὲ τοῦ cτίχου τελευταία οὖcα τὸν τόπον, ἑνὸc λείποντοc χρόνου, ὅτι δωδεκαcύλλαβοc ὁ cτίχοc ἐcτίν, ἡ τελευταία cυλλαβὴ γ´ χρόνων ἐcτίν. This was evidently written by a Byzantine who no longer measured syllabic quantities but merely counted syllables, and who endeavoured to reconcile the δωδεκάcημοc of the intrusive scholion with the eleven syllables that he found in the verses. He confused syllables with time-units—these apokrota contain not eleven or twelve but fifteen χρόνοι πρῶτοι—and explained the count of twelve in an eleven-syllable verse simply by assuming an extra time-unit in the final syllable.

I. Henderson was moved by the scholion to deny the transmitted musical settings to Mesomedes and to explain them as Byzantine reconstructions applied to his poems.[4] Her principal objection was to the musical setting of an ecphrasis such as *On a Sundial*, as implied by the statement of a key. The difficulty disappears once it is accepted that that first part of the scholion did not originally belong to this poem. Nor does the fact that the second, syllable-counting part of the scholion is of Byzantine date prove that the Mesomedes melodies are not genuine, for the first part, which it is attempting to explain, belongs to an older stratum of scholia in **α** and **O** which show a correct understanding of quantitative metre, and which presuppose the musical settings of several poems, as they specify the notation-keys in three cases. Thus Henderson's observations become arguments for the age and authenticity of the settings, both the preserved ones and those attested by scholia.

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[1] Aristox. *Rhythm.* pp. 16–18 Pearson; similarly Arist. Quint. 1. 34 ff.; Bacchius 100 f. (p. 315 Jan).

[2] Horna (1928), 8; cf. Arist. Quint. 1. 36.

[3] Hephaest. *Ench.* 10. 2; Schröder (1929), 11; (1930), 19, 157; Koster (1936), 21, 179 n. 1; Snell (1955), 23 n. 1; Dain (1965), 22.

[4] Henderson (1957), 371–3.

Henderson's other arguments against the genuineness of the melodies do not stand up to closer consideration of the transmission. The incompleteness of the rhythmical notation is certainly noteworthy; but at least in the case of the leimma this may be attributed to progressive degradation of the tradition, such as we were able to see in the extant manuscripts.[1] Then it might seem supicious that the notation in **N** is written in red ink, as Byzantine notation is. But we have seen that in the archetype the text, accents, and notation were all written in the same colour of ink, *scil.* black.[2]

Finally, the observation that the melodies do not show such careful regard to the word accents as in most of the fragments on stone or papyrus loses its force when it is borne in mind that the portion from 24. 1 to 27. 9, where the notation is transmitted in three manuscripts, is free from disagreements except for the initial rising fifth, paralleled at the beginning of Seikilos' song. So is 27. 10–12, preserved only in **V** and **N**, once one easy correction has been made.

The disagreements of word accent and melody are more numerous in the remaining portion, where **N** is the sole source: 27. 13 παγάν, 16 τίκτουςιν; 28. 4 χαλινῶι, 10 γαυρούμενον, 15 ῥοπά. Here the fault may lie with the transmission. West has proposed emendations which would correct all the clashes.[3] In any case it will be better not to rely on this part of the text in arguing about authenticity or in making comparisons with the other musical documents in regard to the treatment of accents.[4]

Horna and Heitsch both concluded that the two separate branches of the Mesomedes tradition, **α** and **O**, went back to a single ancient edition, and they speculated about its contents.[5] We can add that it contained a couple of poems that have now disappeared and are attested only by scholia. Musical settings are certain only for the first two of the prooimia (nos. 24–5), for the hymns to Helios (27), Nemesis (28), and Isis (29), and for two lost poems (30–1).

The Nemesis hymn was perhaps followed by Ariphron's hymn to Hygieia, which precedes the other poems in **O**. Horna's conjecture that this poem from the fourth century BC was set to music by Mesomedes deserves consideration; at any rate it suddenly became well known again in Mesomedes' time, as the multitude of quotations and the epigraphic evidence indicates.[6]

Finally, a further indication of the poems' provenance is given by the peculiar note before the Hygieia hymn in **O**, παρεξεβλήθηcαν ἀπὸ τῆc Μουcικῆc. Compare the heading of the 'Hormasia', ἡ κοινὴ ὁρμαcία ἡ ἀπὸ τῆc Μουcικῆc μεταβληθεῖcα, and the note ἀπὸ τῆc

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[1] Above, p. 111.

[2] Above, p. 109 n. 1.

[3] West 1 (1992), 10 f.

[4] Jammers (1941), 107, remarked that in the Helios and Nemesis hymns the accentual clashes were concentrated at the beginnings and ends of verses. Of the five instances that still remain in our improved text, two occur in the first word of the line (27. 16; 28. 10) and three in the last (27. 13; 28. 4, 15). The clash at 27. 23 ὑπο is only apparent, as the preposition in proclitic position really has no accent.

[5] Horna (1928), 6, 30 ff.; Heitsch (1959), 42 ff.

[6] Plut. *De virt. mor.* 10, 450b; *De frat. am.* 2, 479a (hence Stob. 4. 27. 9); Luc. *Laps.* (64) 6; Max. Tyr. 7. 1; Ath. 15. 702ab; Sext. Emp. *adv. Math.* 9. 49; Them. *Or.* 11. 151bc; *IG* 2^2. 4533 (Athens, 3rd c. AD); *IG* 4^2. 132 (Epidaurus, 4th c. AD).

Μουcικῆc attached to some excerpts on music theory edited by Reinach.[1] Reinach postulated as the common source a corpus of theoretical writing on music which bore the title ἡ Μουcική. This may have been the channel by which Mesomedes (apart from the two Anthology poems) was transmitted.

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[1] Pöhlmann (1970), 32 no. 6; Reinach (1897), 324.

Nos. 32–7 ANONYMI Bellermann § 97–101; 104 Third–fourth century AD?

No. 32 § 104 Κῶλον ἑξάcημον

1 L̇ ∪̄ < ⊔̄ ⊏ <̄ ¬ ∪̄ ¬̄ < ¬ F C 2 C ∪̄ ¬ ∪̄ L̇ ⊔̄ <̄

No. 33 § 97 Ἄλλοc ἑξάcημοc

3 ⊢ Γ̿ L F̄̇ ⊢ L̄ Γ F̄̇ 4 ⊢ F̄ Γ L̄̇ ⊢ Γ̄ F L̄̇ 5 ⊢ L̄ F Γ̄̇ ⊢ F̄ L Γ̄̇

No. 34 § 100 Τετράcημοc

6 ⊢ Γ L̇ Ḟ ⊢ L Γ̇ Ḟ 7 ⊢ F Γ̇ L̇ ⊢ Γ Ḟ L̇ 8 ⊢ L Ḟ Γ̇ ⊢ F L̇ Γ̇

No. 35 § 98 Δωδεκάcημοc

9 ⊢ Λ F ⊢ F C Λ C L ⊢ Λ̄ 10 C Λ F Ḟ L̇ L̇ Γ Λ Γ F L Λ̇
11 ⊢ Γ̇ L Γ̇ L̇ F Λ̇ C L F Λ̄̇ 12 C F C Ḟ L̇ F Λ̈ C L̇ ⊢ Λ̄

No. 36 § 99 <Ἄλλοc> δωδεκάcημοc

13 ⊢̄ Γ Λ̇ L̇ F Ċ U̇ ¬ Λ̇ <̄ 14 <̄ ¬ Λ̇ U̇ Ċ F L̇ Γ Λ̇ ⊢̄

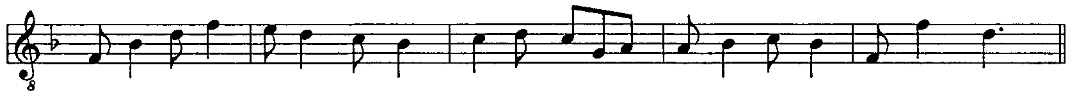
No. 37 § 101 Ὀκτω<καιδεκά>cημοc

15 ⊢ Λ̇ Γ L̇ F C Ḟ C̄ 16 ⊢ Λ̇ Γ L̇ F C F L̄
17 ⊢ Λ̇ L Γ̇ ⊢ L Γ̇ L̄ 18 C F F F F Γ̇ F L ⊢̇

Notation 1 The notes < (Bellermann 1841, 98) appear in **V** as ⊢ 2 C ∪̄ ¬ ∪̄ in **V**, C̄ ∪ ¬̄ ∪ Najock (1975), 33 <̄ Pöhlmann (1970), 36, <̈ Westphal (1867) Suppl. 52, ⊢ in **V** 3 First ⊢ Bellermann (1841), 94, ⊢̄ in **V** 5 F̿ Bellermann (1841), 94, F in **V** 9 Λ̄ Westphal (1867) Suppl. 50, Λ in **V** 11 Λ̄̇ Pöhlmann (1970) 38, Λ̇ in **V**, Λ̄ Westphal (1867) Suppl. 50 12 Λ̄ Westphal (1867) Suppl. 50, Λ in **V** 13 ⊢̄ and <̄̇ Westphal (1867) Suppl. 50, ⊢ and ⊢̄ in **V**, <̄ Pöhlmann (1970), 38 14 Γ Westphal (1867) Suppl. 50, < in **V**.

Text No. 35 δωδεκάcημοc Westphal (1867) Suppl. 50, ἑνδεκάcημοc **V** No. 36 <ἄλλοc> Pöhlmann (1970), 38 No. 37 ὀκτωκαιδεκάcημοc Pöhlmann (1970), 38, δεκάcημοc Westphal (1867) Suppl. 52, ὀκτάcημοc **V**.

No. 32



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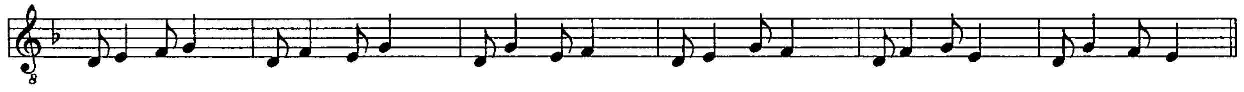

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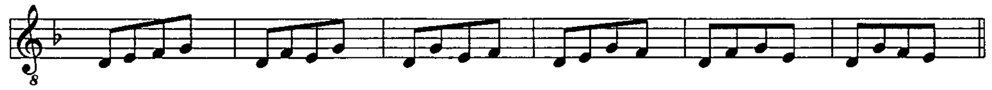

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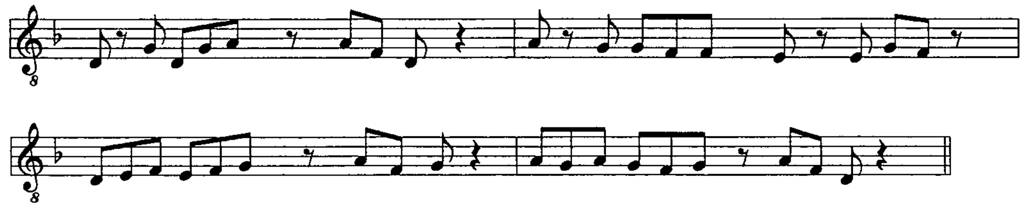

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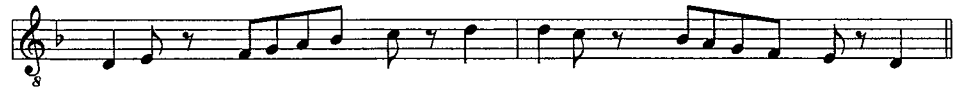

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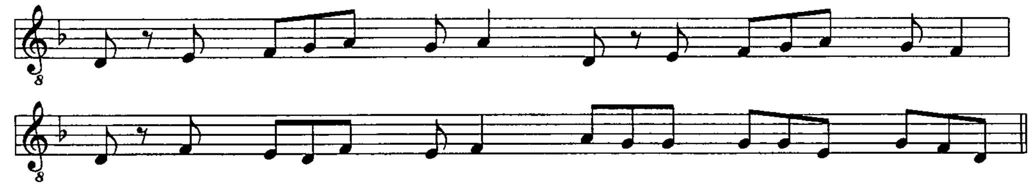

These six Lydian instrumental items have been known since 1841: they stand at the end (§97–101 and 104) of a compilation of treatises on Greek music first published in that year by F. Bellermann.[1] Their purpose is clearly to illustrate the use of the rhythmical symbols.

Bellermann used six late manuscripts for his edition. A. J. H. Vincent published a translation and commentary, divided the text into two separate treatises,[2] but made little improvement to the text of the melodies. R. Westphal appended the pieces to his *Rhythmik*, adducing two more late manuscripts.[3] C. von Jan studied the structure of the compilation and identified the beginning of a third treatise at §66,[4] but did not include the melodies in the appendix to his *Musici scriptores*. R. Wagner was the first to consult Venetus Marcianus VI 10 (**V**), but contented himself with commenting on the rhythmical notation.[5] E. Pöhlmann showed that Bellermann's Anonymi represent an aggregate of independent technical writings, to which the instrumental melodies were appended subsequently.[6] D. Najock produced the first critical edition,[7] and gave a definitive account of the manuscript relationships.[8]

The manuscripts fall into three groups. We can ignore all those that contain only excerpts, as they omit the sections with the melodies.[9] Three further manuscripts, Neapolitanus Graecus III C 4 (**N**; already known to Bellermann), its apograph Vaticanus Urbinas 77, and Florentinus Riccardianus 41 (**F**), do not contain the melodies and likewise remain out of consideration here.[10] A third group of manuscripts, which contain the whole of §§1–104 and thus include the melodies, derive from **V**, which is therefore, so far as the melodies are concerned, the *codex unicus.*[11]

This disposes of an argument of Vincent against the antiquity and genuineness of the melodies. As they did not appear in **N**, the oldest of the manuscripts known to him, but in all the later ones, he inferred that they were later inventions.[12] Now that we know that the oldest manuscript is **V**, which does contain them, the situation is reversed: the redactor of the branch to which **N** and **F** belong omitted §§83–104, perhaps because he had noticed that §§83–93 were identical with §§1–11, and ended his version of the compilation with a table of scales and with the much-excerpted chapter 3. 16 of Ptolemy's *Harmonics* on the connection between the stepwise construction of the scales and the planetary system.[13]

A glance at *pl. 9*, however, will show that **V** too has its deficiencies. The page in question, f. 197^v, is a jumble of additions and notes. After the end of §94 (ὑπερλύδιον) and §95—known from Aristides Quintilianus, p. 31. 24–7 W.-I. and Aristoxenus *Rhythm.* 2, 6, p. 4 Pearson—there follows as §96 a scale of notes with reference numbers for the interval ratios, much as in the lacunose §79. In the right-hand column stands §103, an independent table of interval ratios. Then come the musical examples: on the far left §97 with §100 below it, to the right of them, reading downwards, §§98, 99, 101, and at the bottom § 102 (a table of symbols for pauses, which would be more in place in §1 = §83); and finally in the right-hand column §104, which probably belongs before §97.

The notation of the examples is also defective, as the critical apparatus indicates. The scribe is especially uncertain in the placing of the arsis-points. Wagner limited himself to discussing the pointing of §§97 and 100, where it is best preserved.[1] In §100 (no. 34) we have a measure of four time units (τετράϲημοϲ) with the clearly preserved pointing ⏑⏑⏑̇⏑̇. The same note sequence appears in §97 (no. 33) in a six-unit measure (ἑξάϲημοϲ), pointed ⏑–⏑∸.[2] §104 (no. 32) is also in six-unit measure, but here a different scheme must be restored, ⏑̇–⏑–.[3]

For the rest, the picture is more confused. §98 (no. 35) is headed in the manuscript ἑνδεκάϲημοϲ, and three of the four lines have just eleven notes, none marked as diseme. The second line, however, has twelve, and on this basis Westphal added a diseme in each of the other lines and emended the heading to δωδεκάϲημοϲ. The pointing is erratic, but the fact that there are points on the fourth, fifth, (sixth?), and final notes in 10, the fourth, fifth, and final in 11, and the fifth (and fourth?) in 12, together with the analogy of §100, may suggest the pattern ⏑⏑⏑⏑̇⏑̇|⏑⏑⏑⏑̇∸. §99 (no. 36) is a scale in 'twelve-time' rhythm; from the irregular pointing in **V** we may consider either –⏑̇⏑̇|⏑⏑⏑̇⏑̇|⏑⏑∸, the rhythmization assumed in our transcription, or (parallel to no. 35) –⏑⏑̇⏑̇⏑̇|⏑⏑⏑⏑̇∸. Finally, § 101 (no. 37), in 'eighteen-time' rhythm, should have three points in each of its four measures, as indeed transmitted in lines 15 and 17. The pattern should presumably be ⏑̇⏑⏑⏑̇⏑⏑⏑̇–.

The didactic purpose of these items is obvious. Three of them lack any musical character: §99 is simply an ascending and descending scale, while the melody of §§97 and 100 consists of six permutations of the notes *d e f g* (keeping *d* as the initial note). This helps us to understand §80 of the Anonymi, where the note-series *d e f g d g*, followed by its inversion *g f e d g d*, is written out twelve times, starting each time from the next highest note. The whole series of 144 notes is then written out backwards in §81. These sections have no rhythmical notation; it is evidently a purely melodic exercise. But such exercises might also be sung, as §78 indicates.

Although the melodies are so formulaic, the examples in §§97–104, which, as we have just seen, are closely connected with those in §§78–81, cannot be dismissed as the additions of a Byzantine copyist. On the contrary: just such systematic use of abstract combination and permutation was characteristic of Hellenistic schooling. In the same way, the pupil learning to write, after mastering the alphabet, was taught the systematic combination of letters in syllables,[4] and in grammatical instruction paradigm sentences were rotated through all the cases in singular, dual, and plural, without regard to the resulting sense or nonsense.[5] So the little instrumental pieces of Bellermann's Anonymi, even if they have little artistic significance, may be taken as documents of musical education in antiquity.

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[1] Bellermann (1841), 94–8; see *pl. 9.*

[2] Vincent (1847), 5–13, 14–63.

[3] Westphal (1867), Suppl. 50–3.

[4] Jan (1871), 414 f.; (1894), 2326.

[5] Wagner (1921), 289–92.

[6] Pöhlmann (1975); 2(1994), 190 f.: §§1–11 = §§83–93, §§12–28, §§29–66, §§66–82, appendix: §§94–104.

[7] Najock (1972), (1975).

[8] Najock (1975), vi–xxii.

[9] Mathiesen (1988), nos 14, 52, 250 (§103 only); nos 114 (§29 only); no. 270 (§§29–57 only); no. 299 (§§33–69, 78 only).

[10] Mathiesen (1988), nos. 203 and 255 (§§1–82 only); no. 176 (§§1–78 only).

[11] **V** (Mathiesen 1988, no. 273) is the source of nos. 20, 36, 41, 87, 89, 95, 172, 181, 198, 200, 204, 219, 230, 238, 253, and 284; nos. 41 and 284 were not known to Najock: see Pöhlmann 2 (1994), 188.

[12] Vincent (1847), 229.

[13] Cf. Düring (1930), lxxvi, lxxxiv ff.

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[1] Wagner (1921), 292 f.

[2] This should be understood as equivalent to ⏑–⏑̇∸, the normal allocation of thesis and arsis in iambic rhythm (Arist. Quint. p. 38. 5 W.-I.), and so marked in no. 23; cf. West 2 (1992), 137. In no. 38 ii 6–8 we again find the arsis-point written over the last note only.

[3] Here again the arsis should be taken as embracing two notes, ⏑̇∸⏑–.

[4] Ziebarth (1913), 4 f.; Marrou (1957), 221–5.

[5] Ziebarth (1913), 16 f.; Marrou (1957), 256 f.

No. 38 PAP. OXY. 2436 Second century AD

]Ȯ C Φ
Col. i 1]ε̣ρειφα

] Φ :RC̄
2].χρειϲ

]C Ƶ̇
3]ρων

]R ? Ṃ
4].π̣π̣οϲ̣

] Ƶ Ƶ
5]φαινε

] O C̄
6]δ̣ομοιϲ

] Ʊ[ ]? Ʊ̄ZM ƱƱ Θ̣[
Col. ii 1 [. .]ι̣ονα̣ .τ̣α̣[. . . . .]π̣π̣ι̣ηψαυωδεμ̣[

?]M͜ Z Z ? [ ]?Z̿ Ʊ ƱƱ̄ E Ʊ [
2 [.]νοδεμο[.].[. .]ν̣υ̣.[. .]α̣ιϲαρεωϲυμητ̣[

Z̄ Ʊ̄ Ẓ[ ] Ṃ PM:MZ̄ Ʊ Ẓ[
3 μουμαλλ̣ο̣νηυτεκνηϲαεγωϲπευϲο[

Z Z Ʊ[ ] I M M Ȯ Ƶ I͜Ƶ C C̄͜Φ [
4 απαλλα[. . . .]ωνκακωνχορευϲατε α̣[

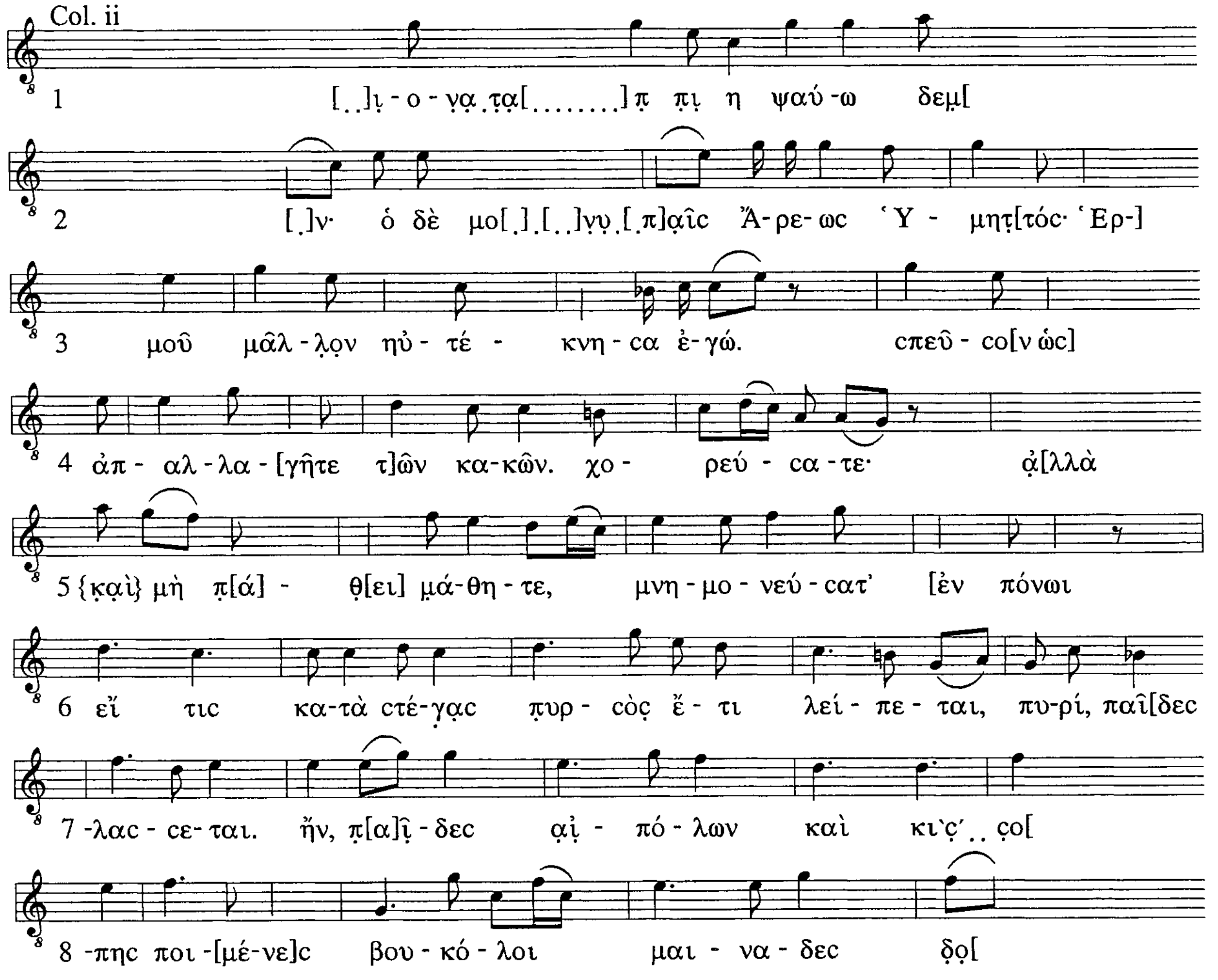
Θ̣ Ʊ̣E[ ]? Ẹ Z̄ I Z͜M Z ZĒ Ʊ ?[
5 κ̣α̣ιμητ̣[.].[. .]μ̣αθητεμνημονευϲατ[

IΛ̄ ṀΛ̄ Ṁ Ṃ[ ] IM̄̇ ĪΛ Ʊ Z İ ƵΛ̄ O:Φ̄̇C Φ Ṁ P[
6 ειτιϲκαταϲτεγα̣ϲπ̣υρϲοϲ̣ ετιλειπεταιπυριπαι[

EΛ̄ I Z̄̇ Z[ ]ẒƱ̣Ʊ̄ ZΛ̄ Ʊ Ē̇ IΛ̄İΛ̄ Ē[
7 λαϲϲεταιηνπ̣[.]ι̣δεϲα̣ι̣πολωνκαικι`ϲ̣´. .ϲ̣ο[

Z̿̇ EΛ̣[ ]?̿̇ ΦΛ̣̄ Ʊ ṂEM̄̇ ZΛ̄ Z Ʊ̿̇ E͜?[
8 πηϲποι[. . . .]ϲβουκολοιμαιναδεϲδ̣ο̣[

Notation i 3 Ƶ̇ West, Turner (1959), 121 comparing the Ƶ line ii 4 4 ? West.
ii 1 Θ̣ West 2 ?Z̿ West, Z̄ Turner (1959), 120 3 Ẓ, Ṃ, Ẓ West M : M Turner (1959), 121, M˙M pap. 5 Θ̣ West E Turner (1959), 120, P̣ West Ẹ Z̄ IZ͜M and Ē Ʊ shifted to μαθητε and νευϲατ by Pöhlmann (1970), 126, 128 ? West 8 EΛ̣ Turner (1959), 121, West, EΛ̣̄ Pöhlmann (1970), 126 ṂEM̄̇ Turner (1959), 121, ⟦P⟧MEM̄̇ pap.


Col. ii
1 [. .]ι̣-ο-ν̣α̣.τ̣α̣[. . . . .]π̣ π̣ι̣ η ψαύ-ω δεμ̣[
2 [.]ν· ὁ δὲ μο[.].[. .]ν̣υ̣.[.π]α̣ῖϲ Ἄ-ρε-ωϲ Ὑ - μητ̣[τόϲ· Ἑρ-]
3 μοῦ μᾶλ-λ̣ο̣ν ηὐ- τέ - κνη-ϲα ἐ-γώ. ϲπεῦ - ϲο[ν ὡϲ]
4 ἀπ- αλ-λα-[γῆτε τ]ῶν κα-κῶν. χο- ρεύ - ϲα-τε· ἀ̣[λλὰ
5 {κ̣α̣ὶ} μὴ π̣[ά] - θ̣[ει] μ̣ά-θη-τε, μνη-μο-νεύ-ϲατ' [ἐν πόνωι
6 εἴ τιϲ κα-τὰ ϲτέ-γα̣ϲ π̣υρ- ϲὸϲ̣ ἔ- τι λεί- πε- ται, πυ-ρί, παῖ[δεϲ
7 -λαϲ- ϲε-ται. ἤν, π̣[α]ῑ̣-δεϲ α̣ἰ̣- πό-λων καὶ κι`ϲ̣´. .ϲ̣ο[
8 -πηϲ ποι-[μέ-νε]ϲ βου-κό-λοι μαι- να-δεϲ δ̣ο̣[

Text i 1 φ]ε̣ρει e.g. Turner (1959), 121, ε̣ or γ̣ or ϲ̣ or τ̣ Kannicht (1981), 270 4].π̣π̣οϲ̣ West,].ε̣π̣οϲ Turner (1959), 120 6 δ̣όμοιϲ Turner (1959), 120, δ̣ or λ̣ or κ̣ Kannicht (1981), 271.
ii 1]ι̣ονα̣.τ̣α̣[Turner (1959), 121,]ι̣ονμ̣ε̣ϲ̣ο̣[better than]π̣οημ̣ε̣τ̣α̣[Kannicht (1981), 271]π̣π̣ι̣η West, ηπ̣ο̣η Turner (1959), 121 better than ηγε̣ϲ̣η Kannicht (1981), 271 δεμ̣[West, δὲ λ̣[ούτρων] Borthwick (1963), 241 2]ν· ὁ δ' ἐμὸ̣[ϲ or]ν· ὁ δὲ μο̣[Kannicht (1981), 271]ν̣υ̣.[West,]ν̣ι̣[. .] or]ι̣ϲ̣[or]π̣[or]η̣[Turner (1959), 121,].α̣ϲ̣τ̣[Kannicht (1981), 271 π]α̣ιϲ Turner (1959), 121 Ὑμητ̣[West, Ὑμηϲ̣[ϲ- or Ὑμήν̣ Turner (1959), 121, π]α̣ῖϲ Ἄρεωϲ Ὑμηϲ̣[ϲόϲ· Ἑρ]||μοῦ West 1 (1992), 12 3 Πριά]|μου Turner (1959), 121 ϲπευϲό[μεθα or -ϲο-[μεν Kannicht (1981), 271, Ἑρ]||μοῦ μᾶλλον ηὐτέκνηϲ' ἐγώ. ϲπεῦϲο[ν, ὡϲ] West 1 (1992), 12 4 ἀπαλλα[γῆτε τ]ῶν West, [-γὴν τ]ῶν Turner (1959), 121, ἐμ]ῶν Kannicht (1981), 271, -γῶϲι τ]ῶν West 1 (1992), 12 ἀ̣[λλά West ε̣[or θ̣[Kannicht (1981), 272, α̣[West 1 (1992), 12 5 κ̣α̣ιμη (not ϲ̣ο̣ι) doubtfully Turner (1959), 120 f., Kannicht (1981), 272, .ημη.[West 1 (1992), 12 {κ̣α̣ι}μήτ̣[West, μὴ π̣[ά]θ̣[ει] μ̣άθητε (θ̣ or ε̣, μ̣ or λ̣) Kannicht (1981), 272 μνημονεύϲατ̣[ε Turner (1959), 121, -ϲατ'[εῦ Kannicht (1981), 272, -ϲατ[-∪-] West 1 (1992), 12, -ϲατ̣'[ἐν πόνῳ e.g. Pöhlmann (1970), 126 6 ϲτέγα̣ϲ not ϲπε̣ο̣ϲ Turner (1959), 120 f., pap., CTE set close π̣υρϲόϲ̣, not θ̣ύρϲοϲ̣ Turner (1959), 121 because of the notes *d'–g'* πυρὶ, παῖ[δεϲ Turner (1959), 121 (unmetrical) 7 ϲε]λάϲϲεται (Nic. *Th.* 46) or φυ], ἀπαλ], πα], μα], ϲτα], ψα], θλα] Turner (1959), 121 π̣[α]ῑ̣δεϲ (π̣ or τ̣, ι̣ or α̣) Turner (1959), 121 κι`ϲ̣´. .ϲο[ West, νϲο[ϲ altered to κι`ϲ´ϲο[ϲ Kannicht (1981), 272, perhaps καὶ κιϲ̣ϲ̣ο[ῖϲ Pöhlmann, ⟦κ̣⟧ν̣ε̣α̣ϲο Turner (1959), 121 8 ποι[μένε]ϲ Turner (1959), 121 δ̣ο̣ perhaps cancelled Turner (1959), 121.

Pap. Oxy. 2436 was published in 1959 by E. G. Turner and R. P. Winnington-Ingram.[1] Its content has been the subject of speculation by various scholars.[2] R. Kannicht re-examined the papyrus and presented a new text (without the musical notation).[3] M. L. West, by restoring col. ii 2–5 as trochaic tetrameters, provided a basis for estimating the column-width, and discussed the rhythms and melody of the piece on this assumption.[4] He has recollated the papyrus for the present edition.

It is a fragment from a roll, with a lower margin measuring about 4 cm. The recto contains remnants of two columns from a dramatic text with Lydian and Hypolydian notation. In the first column there remain only word-ends from six lines, preceded by a gap of at least one line (or a lost line that was exceptionally short). This apparently marked the beginning of a new section, or of a new item in an anthology. From the second column we have beginnings of the last eight lines, each extending for 10.5 to 11.5 cm.; West's supplements yield a maximum column-width of 12.5 cm.[5] The ἔκθεϲιϲ at ii 6 marks the beginning of iambic lyrics with frequent syncopation. The two following lines are again indented. The hand of the text points to a dating in the early second century AD. The notation was added by a different hand, which helps to explain the misalignment of text and notation in ii 5. The verso of the papyrus has remains of a magical text from the second or third century.

The notes used, R (*f*), Φ (*g*), C (*a*), P (*b♭*), M (*c′*), O (*b*), Ƶ (*c′*), I (*d′*), Z (*e′*), E (*f′*), Ʊ (*g′*), and perhaps ϴ (*a′*), are from the Hypolydian/Lydian scale system. As may be seen from the transcription, agreement of word accent and melody is sought, but there is divergence in two instances.[6]

The rhythmic notation employs the diseme, hyphen, stigme, colon, and leimma. Rhythmic signs are most prominent in ii 6–8, where syncopated and unsyncopated iambic metra appear, much as they are described in a treatise attributed to Aristoxenus.[7] Besides x–∪– there appear the syncopated forms ᒻ∪ – and ᒻ∪∪∪, even ᒻ ᒻ. The triseme longs are indicated by a diseme leimma ($\overline{\Lambda}$) following the note of the thesis. In one case (ii 6 πυρϲὸϲ) the diseme sign stands over the note itself instead of the leimma. The arsis, which carries the stigme, comes after the thesis, as in Aristides Quintilianus' description (1. 17 p. 38. 5 W.-I.). It is similar in the Seikilos song (no. 23), except that there the arsis is mostly syncopated.

From the iambic character of ii 6–8 the first editors concluded that ii 1–5 were also to be analysed as iambics, though Turner recognized catalectic endings in the note-groups : M$\overline{\text{Z}}$ and $\underbrace{\overline{\text{C}}\Phi}$ in ii 3–4.[8] However, his proposal to treat those groups as triseme is not in accord with the manner in which trisemes are notated in ii 6–8 (long leimma or three notes). It now appears that they represent the ends of trochaic tetrameters, the catalexes being left unmarked in the ancient notation. In our transcription we express them with a quaver pause.

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[1] Winnington-Ingram (1959); Pöhlmann (1970), 126–9 (no. 38); the text also in Page (1962), no. 1024.

[2] Dale in Turner (1959), 115 no. 2; Lloyd-Jones (1961), 21; Gentili (1961); 341, Borthwick (1963); Lesky (1964), 244.

[3] Kannicht (1981), 270–2, no. 681 (CATYPOI).

[4] West 1 (1992), 12; 2 (1992), 310 f.

[5] Columns of comparable width are found in no. 8 (12+ cm.) and nos. 41 and 44 (11+ cm.). Wide columns are typical of musical texts; many have even wider ones: see Johnson 1 (2000), 66–8.

[6] ii 5 μνημονεύϲατ', ii 8 μαινάδεϲ.

[7] Pearson (1990), 36–38, 79 f.

[8] Turner (1959), 114.

Certain details call for comment. At ii 2 ῎Αρεωϲ is provided with three notes, though from a metrical point of view it would be read as disyllabic. At ii 3 the 'elided' vowel in ηὑτέκνηϲ(α) ἐγώ is both written (*scriptio plena*) and furnished with its own note; we shall find the same phenomenon in no. 40. In ii 5 a long note appears over the short syllable μα(θ), and we must assume that a series of notes has been displaced one syllable to the left of where they ought to be, with I $\underbrace{\text{ZM}}$ making a three-note group on the single syllable τεμ(ν), like Ƶ $\underbrace{\text{IƵ}}$ on ρευ in ii 4, interpreted rhythmically as ♩♫. In ii 6 there is what seems to be a false arsis-point over κατὰ.[1] At the end of that line πυριπαι[is metrically inexplicable, and the notation does not help to elucidate it. In ii 7 the notation implies that ἦν, π[α]ῖδεϲ represents an iambic metron, with the last syllable scanned long: there is clearly something wrong here. In the last line the note-group ṂE$\overline{\text{M}}$ should have a hyphen or colon to bind it together.

The editors inclined to see the fragment as a monody from a satyr play, and H. Lloyd-Jones concurred. In favour of it are the metre[2] and the calls to the chorus at ii 4 f. and to the country folk at ii 7 f.[3] The singer, in view of the παῖδεϲ in ii 6–7, might be Silenus.[4] As to the subject matter, A. M. Dale, pointing to π]αῖϲ ῎Αρεωϲ, ηὑτέκνηϲα, and πυρϲόϲ (ii 2, 3, 6), thought of the Meleager story and a monody of Althaea.[5] B. Gentili and A. Lesky even admitted the possibility that the fragment came from Euripides' *Meleagros*.[6] But ii 4, 7, and 8 are hard to understand on such a hypothesis. E. K. Borthwick found a clue in ii 2 ῾Υμηṭ[τ-, bringing it into conjunction with two testimonia from Old Comedy about a holy fountain of Aphrodite on Hymettus whose water helped women to conceive: *Κύλλου πήραν·* ἡ Πήρα χωρίον πρὸϲ τῶι ῾Υμηττῶι, ἐν ὧι ἱερὸν ᾿Αφροδίτηϲ καὶ κρήνη, ἐξ ἧϲ αἱ πιοῦϲαι εὐτοκοῦϲι καὶ αἱ ἄγονοι γόνιμοι γίνονται (*PCG* IV, Cratin. 110); *τὸ δὲ πορνεῖον Κύλλου πήρα·* ἔϲτι γὰρ χωρίον ᾿Αθήνηϲιν ἐπηρεφὲϲ καὶ κρήνη (*PCG* III *2*, Aristoph. 283). Borthwick took our fragment to be the monody of a woman cured of her childlessness by the fountain, glorying in her offspring (ii 3), and calling upon the chorus to dance in celebration of her good fortune. The son of Ares (ii 2) would fit in if taken to be Eros (cf. Simonides, *PMG* 575), and so would the (lustration) torches (ii 6). This all points again to satyric drama or comedy.[7] Kannicht too holds to the satyric interpretation.[8]

The fact that the melodic line does not precisely follow the original metre (῎Αρεωϲ, ηὑτέκνηϲα ἐγώ), nor the word accents as faithfully as in nos. 20–1, led the editors to suppose that it was a late setting of an old text, a practice common in the Hellenistic and Roman periods.[9] The nature of the roll from which the fragment comes can only be conjectured. The harmonic and rhythmical notation in the scanty remnants of col. i are compatible with their belonging together with the text in col. ii. The gap above i. 1 suggests that that line was the beginning of the song. But it must remain an open question whether the roll contained a whole drama or was some sort of anthology, like nos. 39–40.

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[1] The leimma after the Ṁ above τιϲ precludes an analysis in trochaic measures (–∪–̇∪̇ = ᒻ–̇∪̇, etc.).

[2] Cf. Soph. *Ichneutai, TRGF* IV F 314. 237 ff., 283 ff., 321 ff., 362 ff.; Eur. *Cycl.* 356–74.

[3] Cf. Aesch. *Diktyulkoi, TrGF* III F 46 a 18–20; Soph. *Ichneutai, TRGF* IV F 314. 32 ff.

[4] Turner (1959), 115; Lloyd-Jones (1961), 21.

[5] In Turner (1959), 115 n. 2.

[6] Gentili (1961), 341; Lesky (1964), 244.

[7] Borthwick (1963).

[8] Kannicht (1981), 271.

[9] Winnington-Ingram (1959), 115, 117.

No. 39 PAP. OSLO 1413 a lines 1–15; b–f First–second century AD

Fr. a

] O̅ ∩̣̅ Z [ ] Z̄ [
1]φαιωκτυπο̣cατρ̣[

2 b] [ ]C Ƶ C̅ Ċ O C̣̅Φ̅ [ ] X
]Ċ[ ]?:Φ̣̅O̅Z̅ Z Ƶ CO [ ] Ȯ
2 a]φ̣ερον[.]ν̣ο̣δ̣υχονν̣εφοcελθ̣[....]τ̣ι⟦c⟧

3 b] T̅⅂ [ ]Z̄Φ ⅂̇ [?]Ƶ Χ̣ [
] İ Ƶ̿ Ȯ I C̅Φ̅ I [ ]Φ̣Ƶ Ċ [ ] Ȯ[
3 a]ε̣πεταιφθιμενωνφαντ[.]cματ̣[....]θ̣ε[

]C ⅂̇⅂ Ị̄ Φ Ċ O̅ ΦĊỌ̅ƵΦ̇ C̅Φ̅[ ]Ƶ̣̿⅂ [
4]μ̣ιονυπ[.]τροχονι ξ ε ι ω [.]δ̣ . [

] O Φ ⟦Ȯ Ż⟧ T̅X̣̅ Ṫ⅂̇ ⟦Φ⟧ X̣̅Φ̣̅[
5]νεπιποτ̣α̣μονταα ν̣[..]λ̣[.]c̣ο̣λ̣[.] . [

] T̅ Λ̅̇ Λ Λ Λ̇ ?̣ ⅂̿ K̇ Ȯ C[?]Ẋ T̿Ż [ ]
6]ι̣cταιφαcγανακα̣τα̣γη̣c̣εβαλονφ̣ρ̣υ̣γιαιτ̣α . [ ]

] C K̇ Ċ O̅ K̿̇ OΛ Ȯ̿ T̿ O[....] T̿̇Ċ Ȯ C̅X̅ T[
7]μ̣μαχοcεμολενθαρcειτλημωνδη̣[....] ι⟦μεια⟧ `δαμεια´

Notation 1 ∩̣̅ Winnington-Ingram (1955), 37 2 b]C Pöhlmann C̣̅Φ̅ Winnington-Ingram (1955), 31, 37 f., C̣Φ pap. (for —⁄ see no. 40 l. 16–18 and below p. 131) 2 a ? : Φ̣̅O̅Z̅ Pöhlmann (1970), 114, ? : ? O̅Z̅ or C ? O̅Z̅ Winnington-Ingram (1955), 31 3 a] Φ̣Ƶ West, Ƶ̿ Winnington-Ingram (1955), 31 4 C Pöhlmann, ?̿ Winnington-Ingram (1955), 32 Ị̄ Winnington-Ingram (1955), 32, Ç Pöhlmann (1970), 121 Ọ̅ West 2 (1992), 203, 311, Ƶ̣̿ Pöhlmann (1970), 114, ⟦Ƶ⟧ Winnington-Ingram (1955), 32 Ƶ̣ or ⟦⅂̅⟧ Ƶ̣ Winnington-Ingram (1955), 32 5 T X̣ or T Ỵ Winnington-Ingram (1955), 32 X̣̅Φ̣̅ West, X̣̅?̅ Winnington-Ingram (1955), 32 6 ⅂̿ Winnington-Ingram (1955), 2, ⅂̅ or Z̄ West 7 C̅X̅ pap., C ⟦K⟧ X or C ⟦X⟧ K Winnington-Ingram (1955), 33.

] O̅ ?[
Fr. b 0] . ευελ̣[

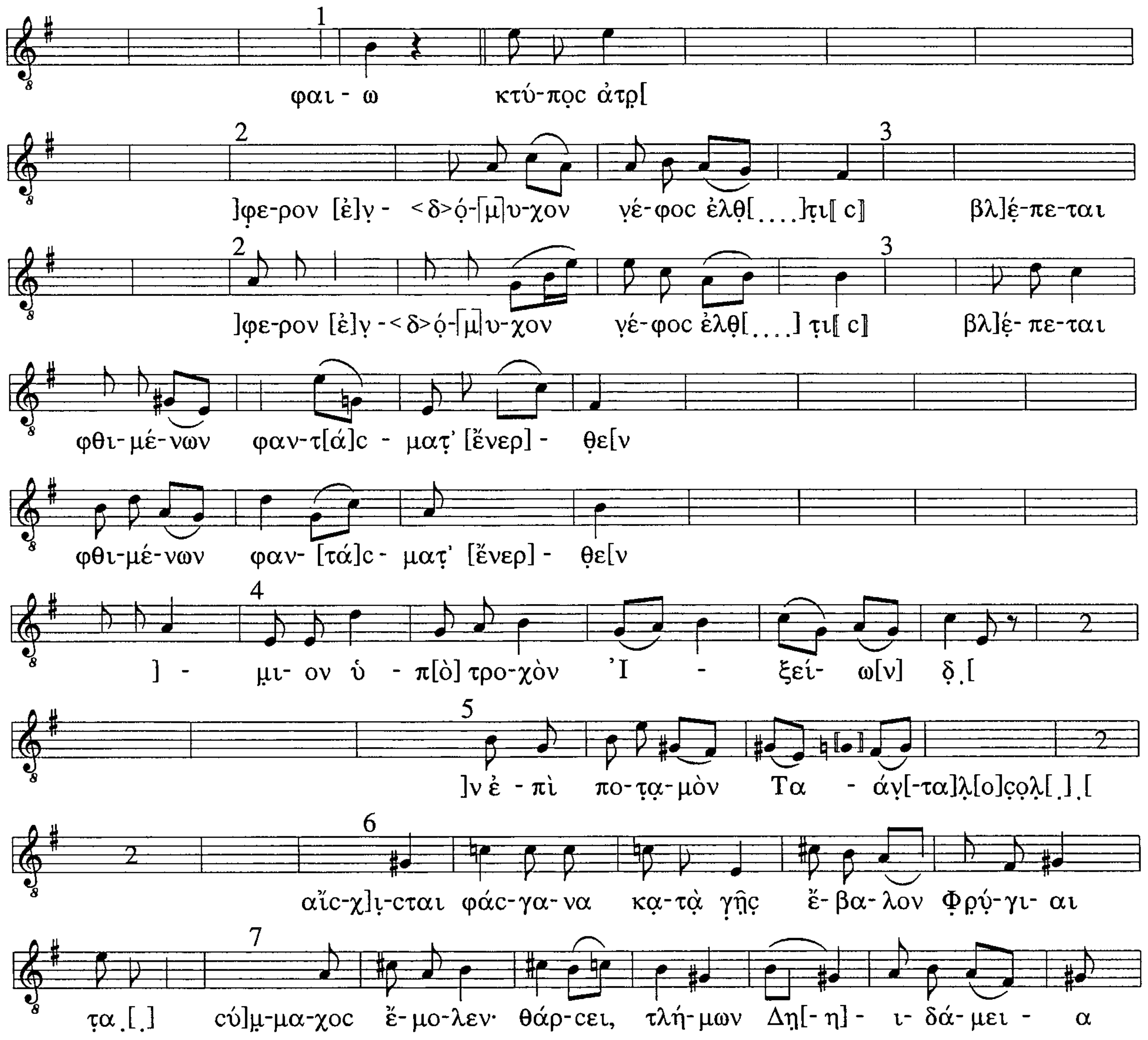
]? Z̅Ƶ̅ ?̅Ċ̅ [
1]οραα c̣α[

] [
Fr. c 0] δ̣ε̣ι̣ν̣η̣[

] O C C[
1] . εμολε[

2 b] Ī Ƶ [
2 a] C̅ Ƶ [

For the position of fr. b–d see p. 128. Fr. d has been inserted at the right end of the lines 2 b–3 a above.


1
φαι - ω κτύ-πο̣c ἀτρ̣[
2 3
]φε-ρον [ἐ]ν̣ - <δ>ὀ̣-⌈μ̣⌉υ-χον ν̣έ-φοc ἐλθ̣[....]τ̣ι⟦ c⟧ βλ]ἐ̣-πε-ται
2 3
]φ̣ε-ρον [ἐ]ν̣ -<δ>ὀ̣-⌈μ̣⌉υ-χον ν̣έ-φοc ἐλθ̣[....] τ̣ι⟦ c⟧ βλ]ἐ̣- πε-ται
φθι-μέ-νων φαν-τ[ά]c - ματ̣ʼ [ἔνερ] - θ̣ε[ν
φθι-μέ-νων φαν- [τά]c - ματ̣ʼ [ἔνερ] - θ̣ε[ν
4 2
] - μ̣ι- ον ὑ - π[ὸ] τρο-χὸν ʼΙ - ξεί- ω[ν] δ̣ .[
5 2
]ν ἐ - πὶ πο-τ̣α̣-μὸν Τα - ἀν̣[-τα]λ̣[ο]c̣ο̣λ̣[.] .[
2 6
αἴc-χ]ι̣-cται φάc-γα-να κα̣-τὰ̣ γῆ̣c̣ ἔ- βα- λον Φ̣ρ̣ύ̣-γι- αι
7
τ̣α .[.] cύ]μ̣-μα-χοc ἔ-μο-λεν· θάρ-cει, τλή-μων Δη̣[- η] - ι- δά-μει - α

Text 1 φαιῳ̣ or κρυ]φαίῳ̣ or κνε]φαίῳ̣ Eitrem–Amundsen [= edd.] (1955), 4, 8 ἀτ̣ρ̣[υγετ- or ἀτ̣ρ̣[υτ- (τ̣ or γ, ρ̣ or ι̣) edd., 4, 8, ἀγρ̣[ομένων Kakridis (1964), 5, ἀγρ̣[οβόαc Kannicht (1981), 267 2]φερο̣ν (φ or ψ, ο̣ or α̣) edd., 4, 6, 8, φ or c̣ or τ̣ Kannicht (1981), 267]ν̣οδ̣υ̇χον pap.,]ν̣οδ̣ or]π̣ον̣ Kannicht (1981), 267, [ἐ]ν̣<δ>ὁμ̣υχον edd., 4, 8 ἐλθ[....]τ̣ι⟦c⟧ West (fr. a+d), ελθ̣[edd., 4 3 βλ]ἐ̣πεται or ἕ̣πεται edd., 4, 8 φαντάcματʼ [ἔνερ]-θ̣ε[ν West (fr. a+d), φαντ[ά]cματ̣[α edd., 6, 10, φαντ[ά]cματʼ [ἄνω Kannicht (1981), 268 4 δέc]μ̣ιον (μ̣ιον rather than] .αιον or]ν̣α̣ιον) edd., 4, 8 f., δρό]μ̣ιον Pöhlmann (1970), 121, ποι]ν̣α̣ῖον Kannicht (1981), 268 ʼΙξείω[ν] edd., 8 f., ʼΙ<ι>ξείω[ν] Pöhlmann (1970), 121 (see l. 5)]δ̣ . or α̣ .[edd., 4 5 Ταά [ντα]λ̣[ο]c̣ ο̣λ̣ edd., 4, 9, Ταά [...]ν̣[τ]α̣λ̣[ο]c̣ Kannicht (1981), 268 6 αἴcχ]ι̣cται e.g. edd., 4, 9 φ̣ρ̣ύ̣γιαι better than c̣τ̣ύ̣-γιαι edd., 5 τ̣ά[ξειc, κοὐδεὶc Snell and Kannicht (1981), 268, λά[θριοc δʼ ἡμῶν e.g. edd., 12 7 cύ]μ̣μαχοc edd., 2, 6 δη̣[....] ι⟦μεια⟧ `δαμεια´ pap., edd., 5, 9, Δη̣[η] Pöhlmann (1970), 121.

]?̄ C̄ Φ Ȯ·C̄ Φ Ẋ ℸ̄T̄ Ṫ Ẋ X̄ Φ̄Ċ̄ ∩̄ ℸ̿̇ ℸ̄ ℸ̄̇ C̣̄ Ọ̄̇
8]η̣μωναγ̣εβηδεπιφεγγοcαχιλλευcκαιγαρδειλαιτρω

] ! Ḳ ? Ī Ƶ̇ Ȯ Ƶ̿ Ċ̄∩̄ Ƶ̿̇ Z̄ Ƶ̇ Ȯ Ƶ̿ Ƶ̿ Ƶ̄Ō C̄ Ƶ̄Ō
9]α̣ναγ̣υ̣μ̣ναπρολιπουcαικαμεγλυκεραβαινε̣ι̣φω̣νη

]?̿̇ ∩̣̄ ℸ̿̇ ℸ̿ ℸ̇ Ṫ X̄ Ṫ ℸ̇ C̄ Ċ Ċ̄ !Ọ̄ C̄Φ̄ Ẋ
10].ηχονδεcαφωcεπ̣ιγε[.....]ωκαιπαcα

]?̄ ?̇ Ƶ̇ℸ̣̄ K̄̇ Λ Ḳ? C Λ̣[ ]? [ ] Z̄C̄
11]cδεcποτικατεδ[......]δ̣.[..]c̣τη

]⟦Ƶ̇ Ƶ̇ ?̇ ?̄⟧ Ċ Ċ K[ ]? [
12]ια̣κ̣[.]νcυνεμοι̣[......]τ̣ο̣[

]Ƶ̿̇ C̄ Ƶ̇ Ȯ ?[ ] [
13]υρρου̣πελαc.[.......].[

]Ọ̄X̄ CO C̄Φ̄ C ∩̄[ ]C̣ Ƶ C C̄Ȱ[ ]? [
14]ηναορατονα̣υτοcτυχονα̣[.]κα̣

]?̇Ċ ℸ̄
15]ο̣ιδα

Notation 8 C̣̄ or Ọ̄ or ℸ̣̄, Ọ̄ or Ċ̣ Winnington-Ingram (1955), 33 9 Ḳ ? West, Ẋ̣ (or Λ̣) Ī̇ Winnington-Ingram (1955), 33 10 ∩̣̄ Winnington-Ingram (1955), 37 Ċ C̄̇ pap. , C̄̇ C̄ expected by Winnington-Ingram (1955), 39 f. !̣ or Φ̣ Winnington-Ingram (1955), 33 11 Ḳ or !̣ Winnington-Ingram (1955), 33 12]⟦Ƶ̇ Ƶ̇ ?̇ ?̄⟧ West, ⟦Ƶ̇ Ƶ̇ Ż Ƶ̿⟧ Winnington-Ingram (1955), 34 14 C̣ or Ọ Winnington-Ingram (1955), 34 C̄Ȱ pap., CȮ expected by Winnington-Ingram (1955), 40.

Fr. e 1] . [

]? I ? ?[
2].ατρα[

]Ƶ̿ I Ƶ̿[
3]υ̣cκια[

]Ƶ̿O Ċ [
4]ρωων[

Fr. f

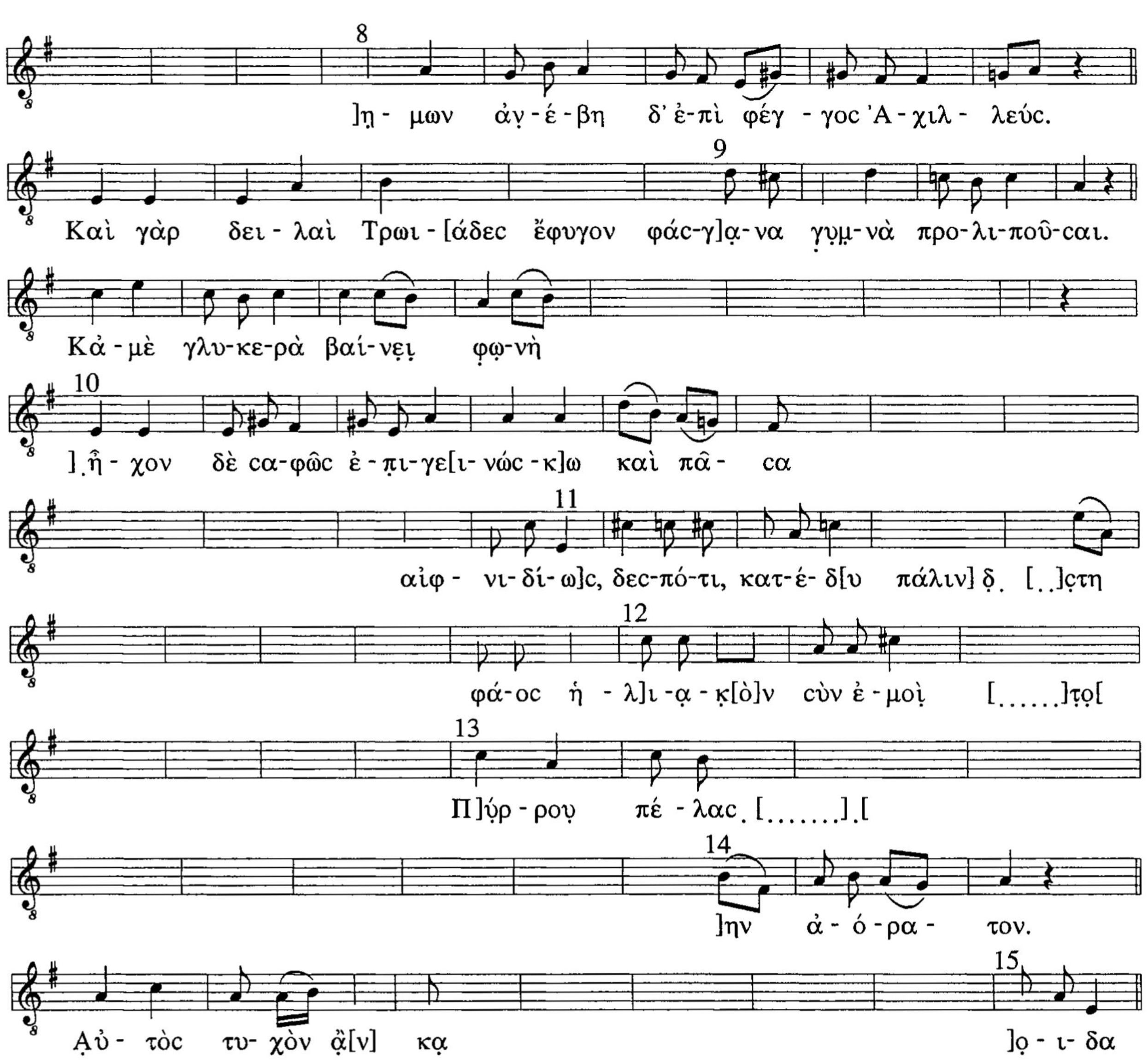
]I I[
1]cτο[

] ? I [
2]οιουτ[

]?̄ Ī C[
3]ενη [

]CỌ̄̇O [
4]ω ..[

Fr. f *Notation* 2 ? pap., Ƶ̣ or Ṃ or Ọ or ?]‾ Winnington-Ingram (1955), 35 3 ?̄ pap., Ọ̄ or P̣̄ or C̣ Winnington-Ingram (1955), 35. For the position of fr. e and f see p. 128.


8
]η̣- μων ἀγ̣-έ-βη δ' ἐ-πὶ φέγ - γος Ἀ-χιλ- λεύς.
9
Καὶ γὰρ δει - λαὶ Τρωι - [άδες ἔφυγον φάς-γ]α̣-να γ̣υ̣μ̣-νὰ προ-λι-ποῦ-cαι.
Κά - μὲ γλυ-κε-ρὰ βαί-νε̣ι̣ φω̣-νὴ
10
].ῆ - χον δὲ cα-φῶc ἐ - π̣ι-γε[ι- νώc -κ]ω καὶ πᾶ - cα
11
αἰφ - νι- δί- ω]c, δεc-πό-τι, κατ-έ- δ[υ πάλιν] δ̣. [..]c̣τη
12
φά-οc ἠ - λ]ι -α̣ - κ̣[ὸ]ν cὺν ἐ - μοὶ̣ [......]τ̣ο̣[
13
Π]ύρ - ρου̣ πέ - λαc.[.......].[
14
]ην ἀ - ό-ρα - τον.
15
Α̣ὐ- τὸc τυ- χὸν ἂ̣[ν] κα̣]ο̣ - ι- δα

Text 8]η̣μων Kannicht (1981), 268 9 Τρῳ̣[άδεc ἔφυγον φάcγ]α̣να Eitrem–Amundsen [= edd.] (1955), 6 10/11 ἐπ̣ιγε[ινώcκ]ω καὶ πᾶcα [χαρά μ' αἱρεῖ e.g. edd., 7, 10, παcα: α with ι below final α pap. : πᾶcαι (?) edd., 9 f., πᾶcα with v.l. πᾶcι Kannicht (1981), 269 11 αἰφνιδίω]c, δεcπότι̣, κατέδ[υ πάλιν] e.g. edd., 10]δ̣ Kannicht (1981), 269,]ο̣ or]ρ̣ edd., 5,]c̣ rather than ε̣ or υ̣ edd., 5 12 φάοc ἠλ]ια̣κ̣[ὸ]ν edd., 10]τ̣ο̣ or]γο̣ edd., 5 13 Π]ύρρου̣ edd., 12, Π]ύρροc̣ Kannicht (1981), 269 πέλαc.[edd., 12 f., πελάc[αc or πέλαc [ὢν Dale (1957), 326 14 ἂ̣[ν edd. (1955), 13 15].ιδα (φ̣ or ρ̣ or ο̣) edd. (1955), 5, Εὐβ]ο̣ΐδα Kannicht (1981), 269.

Pap. Oslo 1413, of unknown provenance, belongs to a small collection of Greek papyri acquired in 1933 from Professor Carl Schmidt in Berlin. It was published in 1955 by S. Eitrem, L. Amundsen, and R. P. Winnington-Ingram.[1] E. G. Turner dated it between AD 80 and 120, while the editors were inclined to put it somewhat later in the second century.[2] R. Kannicht has revised the poetic text from photographs,[3] and M. L. West has published a new transcription of the music and discussed the setting.[4] The music has attracted less attention than the text.[5] We are indebted to Gunn Haaland for new photographs in which, in contrast to the original publication, the attempt is made to place the smaller fragments c–f and m in relation to the main fragment a.

Fragment a, whose right and lower margins are preserved, contains the lacunose remains of a section in anapaests (lines 1–15, = no. 39), with catalexis marked in five places, and then of a section in iambic trimeters, marked off from the first section by a wide space and by change of key (lines 15–19, = no. 40). The anapaestic section may perhaps end without catalexis, if the two notes above]ọι were not linked by a diseme and/or hyphen, in which case it is possibly incomplete.[6]

Of the twelve small fragments b–m, b–f can be assigned to no. 39 and j and m to no. 40.[7] Fragments b–e are linked to no. 39 by their use of the stigme and of the note Ƶ, neither of which is employed in no. 40. In fr. c and d, moreover, we see remains of double lines of notation which can with some probability be identified with those in lines 2 and 3 of fr. a (see below); fr. d has line-ends, and can therefore be placed exactly, a little to the right of fr. a, 2–3, while fr. c must belong somewhere to the left of fr. a, 0–2. As for fr. f, Winnington-Ingram attributed it to no. 40 because of 'the clear absence of a diseme at 4, and in general the absence of rhythmical symbols in the first two lines'; in no. 39 almost all long notes are marked with disemes, and each arsis with a stigme, whereas in no. 40 most of the longs are unmarked and there are no stigmai. But there is a clear stigme in line 4 of the fragment, and its suggested location to the left of fr. a lines 16–19 seems ruled out by the spacing of the lines, which does not agree with that of 16–19 but fits very well with 4–7 or 8–11 or 9–12.

Text and notation are apparently in the same hand, though the notation is in paler ink, as is a correction in the text at line 7.[8] At two places (5, 7) there is a gap in mid-word, evidently to leave room for the notation of melisms. In line 2 and towards the end of 3 an additional note series has been written in above the first, presumably giving the composer's second thoughts and thus implying that the papyrus was his autograph.[9] Elsewhere certain notes have been cancelled without others being substituted.

The two texts were presumably not the melodist's own.[10] As it is difficult to reconcile them as parts of the same composition (see below), they are treated here as two separate items from an anthology.

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[1] Winnington-Ingram (1955), (1958), 7 f.; see pl. 10.

[2] Eitrem–Amundsen (1955), 4.

[3] Kannicht (1981), 267–70 (F 680 a–c).

[4] West 2 (1992), 311–14 (nos. 30–1 f.).

[5] Borthwick (1956); Chantraine (1957); Dale (1957); Pighi (1959); Pappalardo (1959); Del Grande (1960), 447–50; Kakridis (1964); Sifakis (1967), 76 f.

[6] Chantraine (1957), 114.

[7] Winnington-Ingram (1955), 61–4 (who, however, assigned fragment f to no. 40).

[8] Eitrem–Amundsen (1955), 1, 5; Winnington-Ingram (1955), 29.

[9] Winnington-Ingram (1955), 56 f.

[10] See however below, p. 130.

The central subject of no. 39 is an epiphany of the dead Achilles. The shades in the underworld become visible; Ixion and Tantalus are mentioned. Some Trojan women throw down their swords in fright. Deidameia is urged to take heart. On the appearance of Achilles the Trojan women flee. Achilles' voice is heard before he sinks back down to Hades. A further vocative in line 11, δεcπότι, addressed to Deidameia, shows that the hero's apparition is being reported to her by a subordinate. What is the dramatic situation? The first editors persuasively argued that Deidameia on Scyros is receiving news of an event at Troy concerning her son Neoptolemus, who is mentioned in line 13. The sword-bearing Trojan women must have been preparing to murder him at his father's tomb (a motif borrowed from Euripides' *Hecuba*, where at Hecuba's instigation they blind Polymestor and kill his children). The tomb had split open, giving a fearsome glimpse into Hades, and Achilles' ghost had come forth, frightening the would-be assassins away.[1] The sensationalism of the story and the emotionalism of the speech suggest a post-classical composition; so do the use of anapaests for a dramatic narrative, and the metrical technique of the anapaests themselves, in which sequences of four shorts are freely admitted.[2]

Neoptolemus also appears in no. 40, for in a Lemnian context the Ἀχιλ[presented in 18 must be he, Achilles' son, not Achilles himself.[3] But the occasion must be the expedition to fetch Philoctetes, and notwithstanding certain scholars' attempts[4] it seems impossible to combine this with the proceedings in no. 39 as parts of one drama, even if a portion has been omitted between the two pieces.

No. 39 uses the notes ⅂ X Φ T C O Ƶ Λ K I Z (*e f# g g# a b c′ c# ↓′ c#′ d′ e′*). Apart from the Λ, here rendered as *c# ↓′*, these belong to the Ionian scale (⅂ X Φ C O K I Z) in modulation with Hypoionian (tetrachord T C O K) and Hyperionian (tetrachord O Ƶ I Z). Where the Λ is used, it probably represents the note a semitone below K, that is *c♭′*, which might equally have been represented by Ƶ. The composer perhaps used Λ because in the passages in question he was in the Hypoionian tetrachord T C O K, in which the Hyperionian Ƶ had no place, and he was conceiving the note as 'K♭'.[5]

The text is set to music in accordance with the word accents, but there are a few clashes of varying degrees of severity.[6] Certain prosodic features are noteworthy: 9 γυμνὰ π'ρολιποῦcαι, and (at least according to the musical notation) 4 ὕπ[ὸ] τροχ͂όν.

The rhythmical notation employs the diseme, stigme, hyphen, leimma, and colon. In five places (1, 8, 9, 10, 14) the leimma with diseme is used to mark catalexis. The leimma sign takes an abnormal form, neither pointed as in nos. 27–8 and 38 nor rounded as in nos. 17–18, 42, 50–2, and 59, but severely flattened, though in line 9 still recognizable as a lambda. Between the leimmata in 8, 9 and 10, and following that in 14, catalectic anapaestic tetrameters must be assumed,[1] and it is possible that the whole passage from 8 καὶ γάρ to the end was in tetrameters, though the preceding part of the text cannot be fitted into this scheme. The arses of each metron are marked with stigmai throughout, and almost every long note carries the diseme sign.

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[1] Eitrem–Amundsen (1955), 10–20.

[2] Eitrem–Amundsen (1955), 8, 26. For anapaestic technique in classical drama cf. West (1982), 95; for the popularity of anapaests in the Imperial period, ibid. 170 f. Cf. no. 44.

[3] Eitrem–Amundsen (1955), 24.

[4] Cf. Borthwick (1956); Dale (1957), 325; Del Grande (1960), 49 f.; Kakridis (1964), 13 f.

[5] Cf. Winnington-Ingram (1955), 46 f. Winnington-Ingram also considered the possibility that the Λ was intended to denote a microtonal interval below K; so too Del Grande (1960), 447. But the other explanation is preferable.

[6] Lines 2b νέφοc, 5 ποταμόν 10 caφῶc, 11 δεcπότι (unless to be taken as proparoxytone on the analogy of δέcποτα). (The prepositions ὑπ[o] (4) and ἐπι (5, 8) are to be regarded as atonic.) For detailed discussion see Winnington-Ingram (1955), 71–3.

A long syllable is divided between three notes at line 2a (–χο̅ν̅), where the hyphen beneath the second and third notes points to the rhythmization ♩♫, and the last note anticipates that on the following syllable. A short note is set to two syllables at 14 (τυ)χόν.

The three names Ixion (4), Tantalus (5), and Deidameia (7) are given extravagant melodic treatment. The initial long syllable is in each case prolonged to tetraseme length and spread over several notes, and the other long ones are also treated melismatically.[2] In the case of Tantalus (and perhaps Deidameia) the first vowel is written double, something not done for normal melisms after the Hellenistic period.[3] After Ταα a space is left to make room for the associated musical notes. In Deidameia's case there is a very wide gap between Δη̣[and ι⟦μεια⟧`δαμεια´; the note T to the right of the gap still belongs to Δη(η)-, and the intervening space must have been occupied by other notes (some of them perhaps cancelled). In Ixion's case the name had been written without spacing, with the consequence that the seven notes allocated to it had to be crowded together.

Has the musician imposed these distorted scansions on a text in which the names were intended to be scanned normally, or were they intrinsic to it? The octaseme Ixion is associated with another piece of unnatural scansion ὑ̋πὸ τροχό̋ν. Was it originally ὕ̋πὸ τ'ροχὸν 'Ιξίων, that is ∪ – ∪ ∪ – – –? The preceding word]μ̣ιον is difficult to reconcile with this hypothesis. Or did ὑπὸ τροχόν represent a resolved anapaest, with 'Ιξίων as a catalectic ending? In the next line Ταάνταλος, as it stands, was apparently scanned – – ∪ ∪, which we should expect to be followed by a monosyllable such as ὅν; without knowing what followed, we cannot say whether it might originally have been just a dactyl. Δηηϊδάμεια, with the lengthened first syllable, may have formed a catalectic period-end, if ἔμολεν· θάρcει constituted a metron, or, on the more obvious colometry | cύ]μμαχος ἔμολεν· | θάρcει, τλήμων |, it may have filled a whole metron with its final short overrunning into the next. Without the lengthening of Δη-, however, it is hard to see how it would have fitted the metre, unless the final -α was irrationally lengthened, or treated as *brevis in longo* in an acatalectic period-end. Overall the hypothesis of an original text with normal prosody seems to raise more difficulties than it solves. Perhaps after all the poet and the melographer were the same man.

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[1] An estimate of the number of syllables missing to the left can be made on the basis of the iambic trimeters of no. 40.

[2] There are similar instances in nos. 17 (Αἶ⟦ι⟧αν) and 53 (Νηρεύc). Cf. West 2 (1992), 203.

[3] In fr. e]ρωων[need not be an example of a doubled vowel, as it may be part of Τ]ρώων or ἡ]ρώων. Wilamowitz (1921), 59 n. 1, refers to manuscript spellings of εὐκλεεῖ, κελαινεφέει for -έϊ in Pindar (*Ol.* 10. 85, *Nem.* 2. 24, fr. 108 b3), but these are simply unmetrical corruptions. A sixth-century Christian hymn (Pap. Erlangen 1; Schubart [1942], 5), written without musical notation, shows several instances of doubled (mostly accented) vowels, and this feature reappears in liturgical manuscripts of the thirteenth century (Gardthausen [1913], 419).

No. 40 PAP. OSLO 1413 a lines 15–19, g–m First–second century AD

For the reasons for treating lines 15–19 of Pap. Oslo 1413 as a separate item, see above on no. 39. The text of no. 40 begins on the same line as the conclusion of no. 39, after a vacant space of about eight letters' width. It is in iambic trimeters, clearly demarcated by hiatus in 16 and by *brevis in longo* with hiatus in 18. A feature of some interest is that the final note or note-group of each trimeter is furnished with a triseme sign (16, 17, 18), which must signify some sort of fermata.[1] The singer must have made a slight pause between the verses to mark their boundaries; certainly he did not prolong the short open final syllable of ἠργάζετο to triple length, though the accompanying instrumental note may have been sustained.

Of the small fragments, m clearly belongs to no. 40 as it contains part of the lower margin, and it may in fact have stood directly before]Ζεύc in line 19. Fragment j is shown to belong by its use of the Lydian note M (see below), though it cannot be located more closely. Fragments g, h, i, k, and l are appended here for convenience, but may equally well belong with no. 39.

The text begins with an apostrophe to Lemnos, the scene of action, and a reference to Hephaestus and his workshop. Then the speaker announces the presence of Neoptolemus. The first editors reasonably see in this the opening scene of a Hellenistic play about Philoctetes which followed the Sophoclean version.[2]

The notes used are ˥ R Φ C P O M I Z (*e f g a b♭ b c′ d′ e′*). This is the Lydian tonos, apart from the isolated repeated O (*b♮*) in line 18, which is a Hypolydian modulation. The vocal range is the same as in no. 39, though the key is quite different.

Melody is generally in accord with word accent, with the possible exception of 19 [ἐφο]β̣ήθηcαν (if the note above β̣η is ˥, not Z). At 16 (but not at 18) a vowel which metre and ordinary pronunciation require to be elided is written in *scriptio plena* and furnished with its own note, which is in fact a 'cadent' anticipating the following note.[3]

The resources of rhythmic notation are employed sparingly. There are no leimmata or stigmai, and the diseme sign is used only where a syllable is divided between two or three notes, mostly in conjunction with the hyphen and in two cases also with the colon. The triseme sign is used at verse-end, as noted above.

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[1] Pappalardo (1959), 223.

[2] Eitrem–Amundsen (1955), 21–5. For several attempts to make it part of the same play as no. 39 see above, p. 129, n. 5.

[3] Similarly in no. 38 ii 3. See West 2 (1992), 203.

PAP. OSLO 1413 a lines 15–19, g–m

Fr. a

IM IP C P M
15 ωλημνεκαικ̣ρα

] C P MI M MP PCM Ī
16]ς̣τοcαναμειξαcδεομουαδα

] M C R Φ Φ C P MM
17]ṭεχνηνκαιπανṭαταcτοιχεια

] M MΦ M I I Í ˥: ẒṂΦ O O
18]̣ οραν̣ηργαζετο̣οδεcταχιλ

] Ṃ : ĪZ MM I Z I M M[ ]
19]λγι̣ο̣ν̣[ ]ζευcο[̣ ̣ ̣ ̣]β̣ηθηcανθεο̣ι̣[

Notation for—⁄ lines 16–18 see no. 39. 2b and above p. 131 18 Ẓ Ṃ Winnington-Ingram (1955), 34, 53 19]Ṃ West, ˥̄ Winnington-Ingram (1955), 2 Z or ˥ West, ˥ Winnington-Ingram (1955), 2.

Fr. g

]να[

Fr. h

]χ̣η[

Fr. i

]̣ [

]ν[

Fr. j

]?[
]̣ [

]Ṁ [
]ον̣[

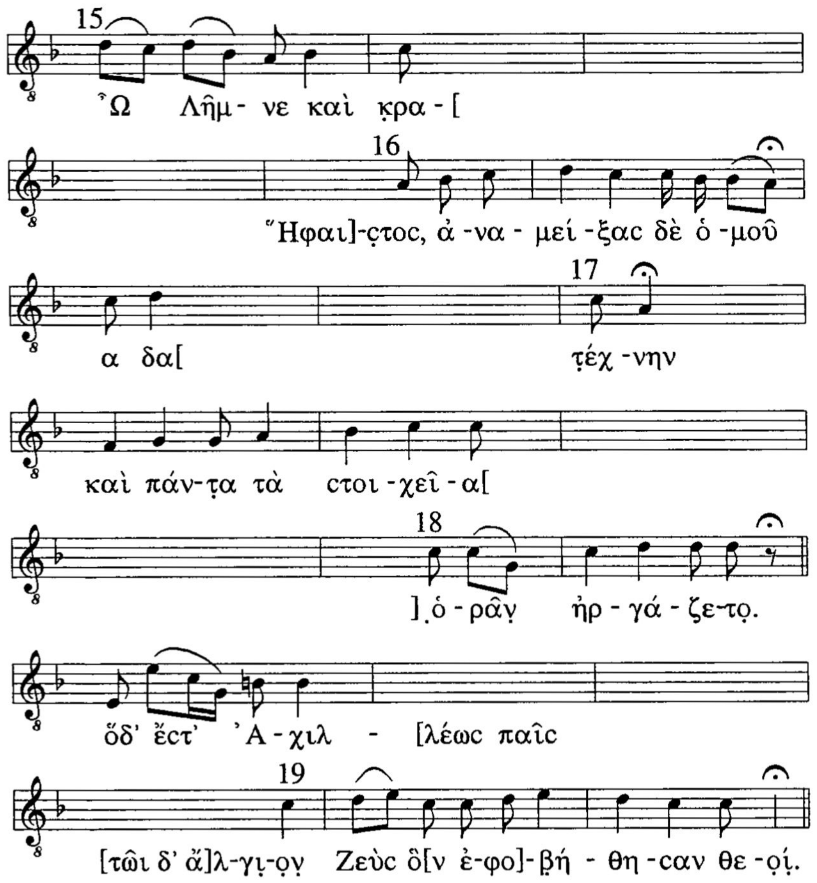
Fr. k

]̣ ̣[
]̣ρ[

Fr. l

]Φ̣? ?[
]̣ ̣ ̣ ̣[

For the position of fr. g–m see p. 128. Fr. m has been inserted at the beginning of line 19.


15
ʾΩ Λῆμ- νε καὶ κ̣ρα - [
16
῞Ηφαι]-ς̣τοc, ἀ -να - μεί -ξαc δὲ ὁ -μοῦ
17
α δα[
ṭέχ -νην
καὶ πάν-ṭα τὰ cτοι -χεῖ - α[
18
]̣ ό - ρᾶν̣ ἠρ - γά - ζε-το̣.
ὅδ' ἐcτ' ʾΑ - χιλ - [λέωc παῖc
19
[τῶι δ' ἄ]λ-γι̣-ο̣ν̣ Ζεὺc ὅ[ν ἐ-φο]-β̣ή - θη -cαν θε -ο̣ί̣.

Text 15 κ̣ρα|[τῆρεc Eitrem–Amundsen [= edd.] (1955), 22, κ̣ρά|[τιcτον ʿΗφαί]cτο[υ cέλαc Winnington-Ingram (1955), 25 16 ῞Ηφαι]ς̣τοc edd., 22 ἆ δα|[ψιλῶc edd., 22, ἄδα|[cτα Kannicht (1981), 269 18]̣ όρᾶν̣ West, ἀ̣όρατ' edd., 23,]α̣ or]ε̣ better than]γ̣ or]ṭ Kannicht (1981), 269 ʾΑχιλ|[λέωc παῖc edd., 24 19 τῶι δ' ἄ]λγι̣ο̣ν̣ Ζεὺc e.g. West (fr. m + a),]α̣γι̣ο̣ν̣[edd., 3 ὅ[ν ἐφο]β̣ήθηcαν edd., 25.

No. 41 PAP. YALE. CtYBR INV. 4510 Early second century AD

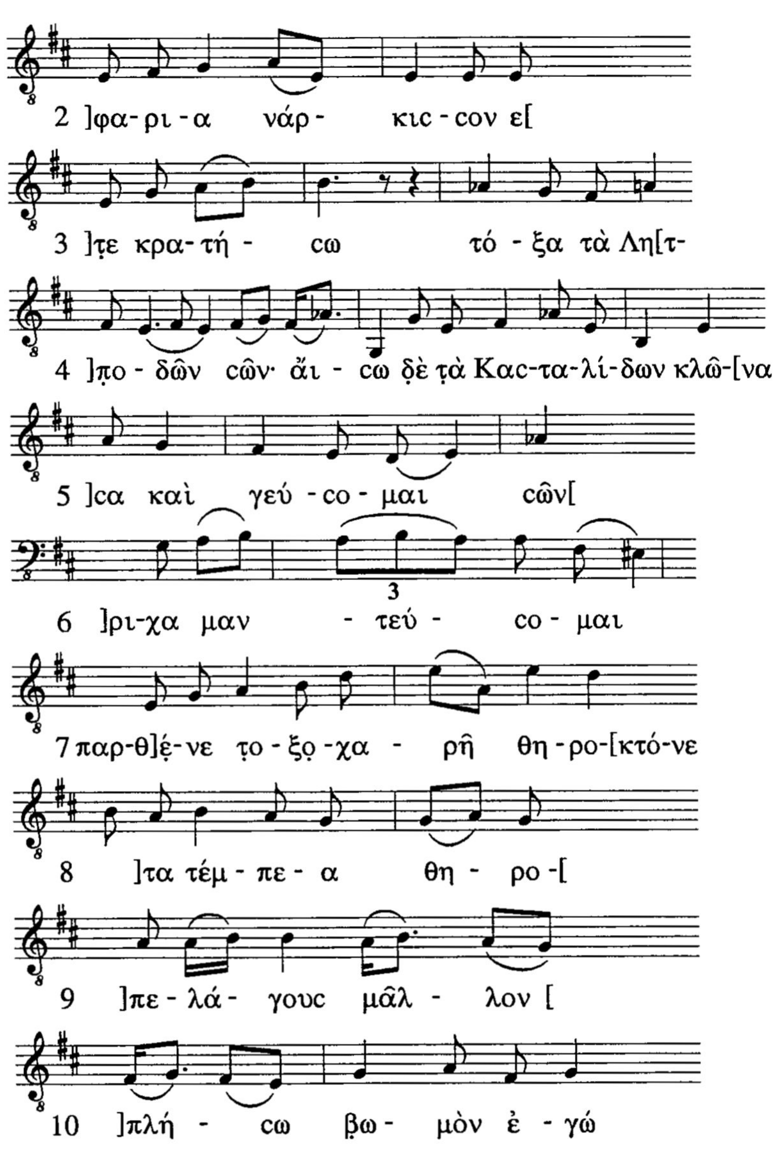
	Col. i	Col. ii
1	]. .[	
2	]┐̣ Χ̣Φ̣ C͜┐̣ ┐̿ ┐ ┐̣̇]φαριαναρκιccονε	. . .
3	]┐ Φ̇ C̄̇O̍͜ŌΠ̇ ΤΦ Χ Ċ]τ̣εκρατηcωτοξαταλη	O͜[ ]? [cαcαπαρθε[
	Φ ┐ Ẋ Ṫ ┐̇ W̄ δ̣ετα̣καcταλιδων	
4	]Χ̣ ┐̿:Χ┐̿̇ :ΧΦ:Χ̣ΤΠ̇3̇ ⟦┐⟧]π̣οδωνcωναcω⟦κλω⟧	┐̇ ┐ ┐ Χ̄͜?[ταcηδονα[
5	] Ċ Φ̄̇ Χ̄ ┐ :7̣̄┐̇ Τ]cακαιγευcομαιcων	Ι͜Κ Ο Κ͜Ι Ζ : Ā͜Z̄Ō[νη τ̣α̣[
6	]? 3 : Ọ̄Ẇ̄ :ỌW̄͜Ọ Ọ͜⊣̇✳]ριχαμαντευcομαι	∮ Ζ Α Ʊ ?[μουcικαλαλ̣[
7	]┐Φ Ċ Ȯ ! Ζ̣̄C̣̄ Ζ İ]ε̣νετο̣ξο̣χαρηθηρο	┐̿ :ΑƱ Ʊ̇ Ȧ[cαικλαιειμ̣α̣[
8	] Ο C Ȯ Ċ Φ̇:Φ̄C̄ Φ]τατεμπεαθηρο	:ΙΑ Α Ʊ Ż[μυρομενη[
9	]? C :C̣Ȯ Ō :CΟΠ̇ C͜Φ]⟦α̣⟧`π´ελαγουcμαλλον	Ʊ̇ Ż̄ Z̄ :ΑƱ [αcορνιc αλλα̣[
10	]:Χ̣Φ̣Π̇ Χ̄͜┐̇ Φ C Χ Φ̇]πληcωβ̣ωμονεγω	Φ̇ Ο ┐̣ [γυνη ποτ̣[

NB: Johnson = Johnson 1 (2000).

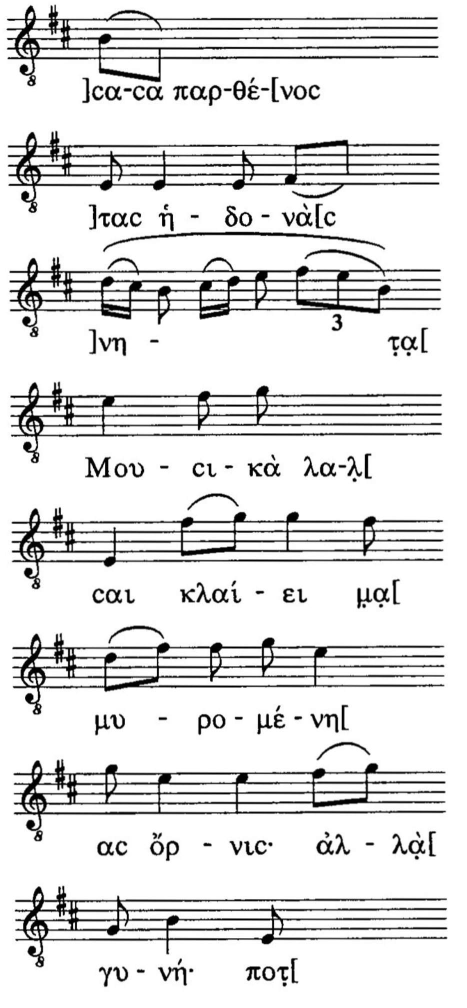
Notation i 2 ┐ rather than Φ C͜┐ West, C͜Φ Johnson, 60, 61 ┐̣: T just possible 3 O̍ West, Ō Johnson, 61 4 Χ̣ West, O or C ? Johnson, 60 XT West, ΦT or ?T or ?C with iota added in text (α`ι´cω) Johnson, 60 3 West, Ƶ Johnson, 74 5 7 West, T or C Johnson, 61 6 3 West, Ƶ Johnson, 74 7 Z̄C̄ West, ?Z Johnson, 61 (? perhaps = X or K) 10 ┐ West, Z pap.

ii 4 ┐̇ : the stigme is faint and displaced to left, and may be stray ink 9 Ż̄ Z̄ carelessly written, unless ┐̿̇ ┐̿ was intended.

Col. i


2]φα- ρι -α νάρ- κιc - cον ε[
3]τε κρα- τή - cω τό - ξα τὰ Λη[τ-
4]π̣ο - δῶν cῶν· ἄι - cω δ̣ὲ τ̣ὰ Καc-τα-λί-δων κλῶ-[να
5]cα καὶ γεύ - co - μαι cῶν[
6]ρι-χα μαν - τεύ - co - μαι
3
7 παρ-θ]έ̣-νε τ̣ο - ξ̣ο̣ -χα - ρῆ θη -ρο-[κτό-νε
8]τα τέμ - πε - α θη - ρο -[
9]πε - λά- γουc μᾶλ - λον [
10]πλή - cω βω- μὸν ἐ - γώ

Col. ii



Text i 2 Metre implies]φαριᾱ rather than]φαρ ἴα 'violets' or ἰὰ 'arrows' Νάρκιccον considered but rejected Johnson, 63 3 τόξα τὰ Λη[τοΐδα West, τόξ' ἀταλῆ[ι χερὶ Johnson, 63 4 Omitted words added above the line 5 Probably continued with κλω[(κλῶνα δάφνηc κατέχων West) 5–6 e.g. cῶν [ὑδάτων West τ]ρίχα Johnson, 62, 64 7 παρθ]ένε West θηρο[κτόν-or θηρο[φόν- e.g. Johnson, 64, 70 8 e.g. θηρο[τόκα, –νόμα, –τρόφα, –βοτα Johnson, 64 9 πελάγουc or]πε λαγούc Johnson, 64.

ii 3 παρθέ[νοc Johnson, 62, 70 4 τὰc ἡδονά[c Johnson, 62, 70, εὐχάρι]ταc e.g. West 5 τ̣α̣[West (e.g. γέ]νητα[ι), π̣[or τ̣ο̣[, τε[, τω̣[Johnson, 60 6 λ̣[: or δ̣, μ, χ̣ 7 μ̣α̣[West, η̣.[Johnson, 60, 61 9 e.g. λειμωνι-]ὰc West.

The papyrus, first published by W. A. Johnson,[1] was acquired from a dealer in 1996 by the Beinecke Rare Books and Manuscript Library at Yale. Its original provenance is unknown. It contains parts of two columns with the lower margin. A coronis at ii 6 marks the start of a new song. Whether ii 2–5 belong to the same composition as the lines in the first column is uncertain, but there is nothing against the supposition, and in what follows we will refer to i 1–10 and ii 2–5 as 'the first song'. As is usual in the musical papyri, the text is laid out in wide columns (though the exact column-width in this case cannot be determined), without colometry.[2] The script is assigned to the early second century AD. The musical notation was added by a different hand. At i 4 this second scribe saw that some words had been omitted from the text, and he wrote them in above the line with their notation; the initial syllable of what followed, κλω, he erased at the end of the line but presumably reinstated at the beginning of the next (possibly with something else before it). He made another correction at i 9. The text is written along the fibres. The back of the papyrus is blank.

The verses are lyrical in character. Those in column i, with their mentions of flowers (2) and perhaps inspiring fountains (5–6), may perhaps recall Antiphanes' criticism of contemporary dithyrambists, quoted above, p. 38. The metre appears to be dactylo-epitrite (see below), which would be compatible with a fourth-century source. The music, on the other hand, being diatonic and melismatic, is not likely to be much older than the papyrus itself, and may have been newly composed.

The notation is Ionian. The melody in the first song moves mainly in the octave ℸ X Φ C O K I Z (*e f# g a b c#′ d′ e′*), with some use of the chromatic Lichanos T (*a♭*). It goes down perhaps to 7 (*d*) at i 5, and rises to A (*f#′*) at the end (ii 5); in the opening lines of the second song A appears frequently, as does the still higher note Ʊ (*g′*).

But the first song also employs some much lower notes. In i 4 there are drops to Ɛ and W (*G*, *B*), and two lines later there is a more sustained plunge into the bass register using the notes ⋇ ⊣ Ɛ Ϙ W (*E# F# G A B*), extending the total compass of the piece to just over two octaves—wider than in any other known document of Greek music, and going lower.[3] This descent is associated with the words]ριχα μαντεύcομαι, and the very low notes were presumably judged appropriate to the mention of prophecy. Did some seers prophesy in a basso profundo? Virgil uses *remugit* of the Sibyl's voice as it resounds through her Cumaean cave as she prophesies, possessed by Apollo;[4] in Greek, however, the verbs λάcκω and κλάζω, applicable to prophets, suggest rather a high-pitched screaming tone.

The division of some long syllables between three notes (i 4, 6) and of a short one between two (i 9) marks this music as belonging to the so-called florid style. But the extent of the melisma at the end of the song (ii 5) is a major surprise: the syllable νη, probably the penultimate syllable of the text, is set to no less than nine notes. Until recently no instance was known of a syllable being spread over more than three notes. Then an example with six notes appeared (no. 57, third century). Now we see that more extravagant melisms were known at a somewhat earlier date. Here, at least, it is a special feature marking the end of the song. It may be worth noting that the melism ends on O, which is the Ionian Mese. But there must have been at least one further note on the following syllable.

The papyrus is well furnished with rhythmic notation: diseme and triseme signs (not present over every long syllable), leimmata, dicola, hyphens, and arsis-dots. These last are of particular interest, as they seem to show dactylo-epitrite verse rhythmized on a different principle from no. 17. Here three types of syzygy or 'bar' (thesis + arsis) can be recognized: dactylic dipody -◡◡-̇◡̇◡̇, choriamb -◡◡̇-̇, syncopated choriamb -◡⏗̇. Thus there is variation between 4/4 and 6/8 time. But both fall under the ancient rhythmicians' category 'dactylic', thesis and arsis being of equal duration.[1]

But some extraordinary rhythmic distortions are indicated. In i 3 the syllable cω seems to account for an entire syzygy, a triseme note in thesis and a triseme leimma in arsis. Does the leimma denote an actual rest, or is the syllable prolonged to hexaseme value? Such a prolongation is unheard of hitherto. Yet in the next line again one word-final syllable, δῶν, is assigned a triseme thesis and triseme arsis. In what follows, cῶν ᾱ- should be another syzygy, and -cω δὲ τὰ Καcταλί- another.[2] But even if the two notes with leimma over ᾱ- add up to triseme length,[3] the two over cῶν, in the absence of a leimma or triseme sign, do not. We should bear in mind that in setting an old text to new music, the composer may not have interpreted the rhythm in the same way as it would have been interpreted originally.

The allocation of time-values in homosyllabic note-groups is not always clear. Where there are two notes with a triseme sign over the second (i 4 δῶν, 5 and 6 μαι), we follow Johnson[4] in interpreting the rhythm as ♪♩. In the opposite situation, three notes under a diseme (and over a hyphen; i 6 τευ, ii 5), Johnson[5] assumes triplets, perhaps rightly, though usually in the papyri the pattern ♩♫ is notated.[6] The instance at ii 5 poses a special problem, being part of the nine-note melisma notated IK O KI Z:AZO. The hyphens under IK and KI should signify that the first six notes are ♫ ♪ ♫ ♪ adding up to two disemes, while AZO is another diseme (whether taken as a triplet or as ♩♫). The total value of the melisma then will be hexaseme, the syllable νη being protacted to three times its natural length, unless we suppose that in this flourish the time-values are shorter than usual .

In most cases the melodic line respects the word accents, but if the readings are correct there are clashes in i 2 (if]φαρία), 4 cῶν and Καcταλίδων, and 7 παρθ]ένε.

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[1] Johnson 1 (2000); see below, *fig. 17*, p. 151.

[2] On column-widths in musical texts see Johnson 1 (2000), 66–8.

[3] The widest compass found otherwise is a twelfth. See West 2 (1992), 274.

[4] *Aen.* 6. 99; cf. 49–51 *maiorque uideri | nec mortale sonans, adflata est numine quando | iam propiore dei*; 77–80.

[1] Cf. Aristox. *Rhythm.* 2. 30 ff. with P. Oxy. 2687 ii 3 ff. (Pearson (1990), 16–18, 37 f.).

[2] If so, the arsis-dot accompanying the note over cω is erroneous.

[3] The similar combinations in i 9 and 10 may be interpreted either as ♪♩ or as ♫.

[4] Johnson 1 (2000), 78 f.

[5] Johnson 1 (2000), 80.

[6] West 2 (1992), 203.

No. 42 PAP. MICHIGAN 2958 lines 1–18 Second century AD

]? AZ∩̇ Ʊ[ ] Ƶ̣̄ ? I [
1]Ẹ[..].. Ω̣ ΦΙΛ ΤẠΤΕ [ ]!ΚΕΤΩ [

] Ạ Ā̇ Z IẒ Ʊ̇ Ẓ̄̇ Ƶ̣[ ]AI[
2]Ṭ[ ]. ΤΙCΕΙ ΠΟṬΗ ΤΙΝΟC ΝẸΟ.[...]..[

]? [ ] Ƶ̄́ ∩̇ Ʊ̇ Ʊ Ʊ Ā Ż Ż̄ [ ]? Z
3]Ṇ Τ[.].Ṭ! ΤΑΔΕΛ̣ΕΓΕΙC ΠΟ Τ⟦Α ṬẠ⟧ [...]ỌṆ

] Ʊ̣ Ʊ̇̄∩̇ ⊖̇̄ Ʊ̣̇̄[ ] Ʊ̇̄ ? Z Ẓ ?Ż̄
4]..ΠẸ ΛΑC ΠΑΝ ΤΗ CỌ..ẠΤΑ.ṂΟC ΙΚ[..]..Ọ

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
5]Ṇ ⊖̣ Ʊ Ạ Ʊ A I Ẓ Ƶ Z ! Ạ C ? C Ạ Φ Φ̣̄

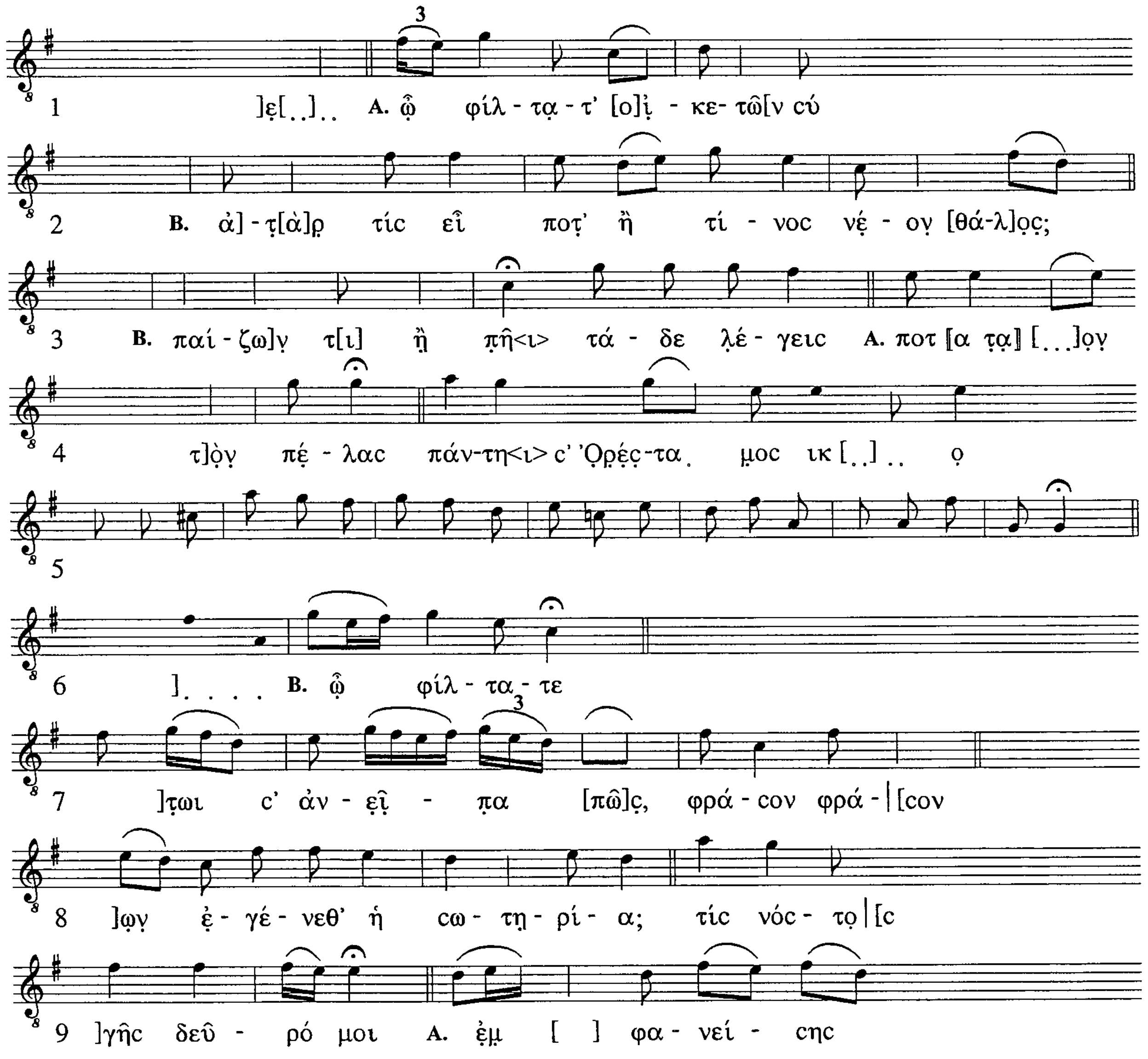
]???ẠÇ ƱZA Ʊ̣̄ Ż Ƶ̄́
6]....Ω̣ ΦΙΛ ΤΑ ΤΕ

]A ƱĀ̇I Ż ƱAZẠ Ʊ̣̇ŻI[ ]??[ ]A Ƶ̣ Ạ
7] ṬΩΙCΑ ΝẸ! [ ]Π̣Α [....]Ç ΦΡΑCΟΝ ΦΡΑ

]Ẓ İ Ƶ̣̇ A A Z̄ I[ ]? Z Ī̇ ⊖̇ Ʊ̄ ?̄
8]Ω̣Ṇ ẸΓΕΝΕΘΗ CΩΤ[ ]ḤΡΙΑ ΤΙC ΝΟCΤỌ

] A Ā̇ ȦŻ Z̄́ ∩̇̄ IŻ?[ ]?̄ I Ā̇Ż Ā̇I
9]ΓΗC ΔΕΥΡΟ ΜΟΙ ẸṂ[ ] ΦΑΝΕΙ CΗC

Notation 2 Ƶ̣ or Ẓ Pearl (1965), 182]AI pap., Aİ or AĪ Pearl (1965), 182 3 Ƶ̄́∩̇ pap., Ẓ̄̇∩̣ Pearl (1965), 180 4 Ʊ̇̄ ? Koenen, Ʊ̇̄ Pearl Ẓ West 5 no. 4 ` ´ Pearl (1965), 180: read as part of no. 3, Ʊ, and no. 5, Ạ Pöhlmann (1970), 130, perhaps : West no. 12/13 /\ Winnington-Ingram (1965), 188, ! Ạ Pöhlmann (1970), 130 no. 18 Φ West, Ẓ Pöhlmann (1970), 130, Ƶ̣ Pearl (1965), 180 no. 19 Φ̣̄ pap., ⅂̣̄ Pearl (1965), 180 6]Ạ Ç Ʊ Z A Ʊ̣̄ West,]? ! A Ʊ̇̄ Pearl (1965), 180, 183 Ƶ̄́ pap., Ƶ̇̄ Pearl (1965), 180 7 Ʊ̣Ā̇I or Ʊ̣ĀI Pearl (1965), 183 ? ? Pöhlmann, Ạ̄̇ ? Pearl (1965), 180 Ƶ̣ West, Ī Pearl (1965), 180 8 Ẓ İ Pöhlmann, Ẓ̄̇I Pearl (1965), 180 9 Z̄́ ∩̇̄ pap., Ż̄ ∩̇̄ Pearl (1965), 180 perhaps IŻ ⟦?⟧ [pap.


3
1]ε̣[..].. A. ὦ̣ φίλ-τα̣-τ' [ο]ι̣-κε-τῶ[ν cὺ
2 B. ἀ]-τ̣[ὰ]ρ̣ τίc εἶ ποτ̣' ἢ τί-νοc νέ̣-ο̣ν̣ [θά-λ]ο̣ς̣;
3 B. παί-ζω]ν̣ τ[ι] ἢ π̣ῆ<ι> τά-δε λ̣έ-γειc A. ποτ ⟦α τ̣α̣⟧ [...]ο̣ν̣
4 τ]ὸ̣ν πέ̣-λαc πάν-τη<ι> c' Ὀ̣ρ̣ές̣-τα̣ μ̣οc ικ[..].. ο̣
5
6]. . . . B. ὦ̣ φίλ-τα-τε
3
7]τ̣ωι c' ἀν-ε̣ι̣-π̣α [πῶ]ς̣, φρά-cον φρά-|[cον
8]ω̣ν̣ ἐ̣-γέ-νεθ' ἡ cω-τη-ρί-α; τίc νόc-το̣|[c
9]γῆc δεῦ-ρό μοι A. ἐ̣μ̣ [ ] φα-νεί-cηc

Text 1]ε[..].. ὦ̣ φίλτατ' [ο]ι̣κετῶ̣[ν cὺ Kannicht (1981), 272, μηδ]έ̣ν̣, ὦ̣ φίλτατε, [ε]ἶ̣κε τῷ̣ [θυμῷ̣] Pearl (1965), 182 2 ἀ]τ̣[ὰ]ρ̣ Kannicht (1981), 272 ποτ̣η or ποθ̣η pap., τίc εἶ ποτ̣' ἢ τίνοc νεο.[...]..[Pearl (1965), 182, νέον̣ [θάλ]ο̣ς̣ West 3 παίζω]ν̣ τ[ι] ἢ̣ τ̣ί̣ West, τ[ι] ἢ π̣ῆ<ι> Pöhlmann,]ητ[.].η Pearl (1965), 180,]ς̣ι̣τ̣[..]τ̣ι̣[Kannicht (1981), 272, τ]ῆ̣ τ[α]φῆ̣ Pöhlmann (1970), 130]ο̣ν̣ West, .]ς̣τ̣ Kannicht (1981) 272 4]..πε̣ Pöhlmann,].γ̣π̣ε̣ Pearl (1965), 180, τ]ὸ̣ν̣ π̣έ̣λαc πάντη̣ Pöhlmann (1970), 130 c' Ὀ̣ρ̣έ̣ς̣-τα West, co..α̣τα (or λ̣τα). μ̣οc ικ[..]..ο̣ (or ε̣) Koenen, co....μ̣ο̣ς̣ ικ̣ Pearl (1965), 183 6 ὦ̣ Pöhlmann 7]τ̣ω Pearl (1965), 180,].ω̣ or].ο or]η̣ Kannicht (1981), 273 ε̣ι̣ and]π̣α[(ἀνεῖπα ?) West, ω̣ and]ρ̣θα[Pearl (1965), 180 [πῶ]ς̣ West φρά|[cov Pearl (1965), 183, φρά|[cω Kannicht (1981), 273 8]ω̣ν̣ Pearl (1965), 180, or ω̣ς̣ Kannicht (1981), 273 νόcτο̣|[c West, νόcτω̣ or νόcτο̣ς̣ Pearl (1965), 183 9]γηc Pearl (1965), 180 ε̣μ̣[West, ἐ̣μ̣[οὶ? Pöhlmann, ε̣κ̣[Pearl (1965), 183.

]   Z̄Í Ṅ̄   Ʊ̇   I   ZICṄ   [   ]Ī   I   Z̄İ   Ẓ   Ẓ   ẒẠ
10]ẠḤC   ΔΙΔΑ ΞΟΝ   ΔΙ⟦.⟧Δ̣ΑΞΟ̣ΝΩCΤΩṆẸỴ .

]Ȧİ[ ]   Ʊ̣̈́ Ṅ   Ʊ̈   ΘƱ ƱA   Ʊ̈Z   AZ̈I   ĀI̩   A
11] . [ ]. .   OY KEC   TA   EΛ   ΠTOY   TEPΨ̣IC

]Ẓ?   Ʊ̣̇   ?   [
12].Ọ Ỵ[.]ΠΡΟC   ẸYN[   ]ṬẠÇ[

]?   ?AṄƱẒ A   Z I[ ]? Ʊ [ ]?Z   Z   I   !Ẓ
13]ΑΛΛΟΔΑΥΜΕ TI ECΠΕΥ[ ]Δ̣Ẹ[ ]ṬPOCHMẸΓ̣[

]Ā /Z   Θ   Z   Θ   Ʊ̣Ạ   Θ̣   [   ]Ʊ   Θ   Ʊ
14].I/OYKANEIΔEIHN   TAΔ[   ]ẠPONTA

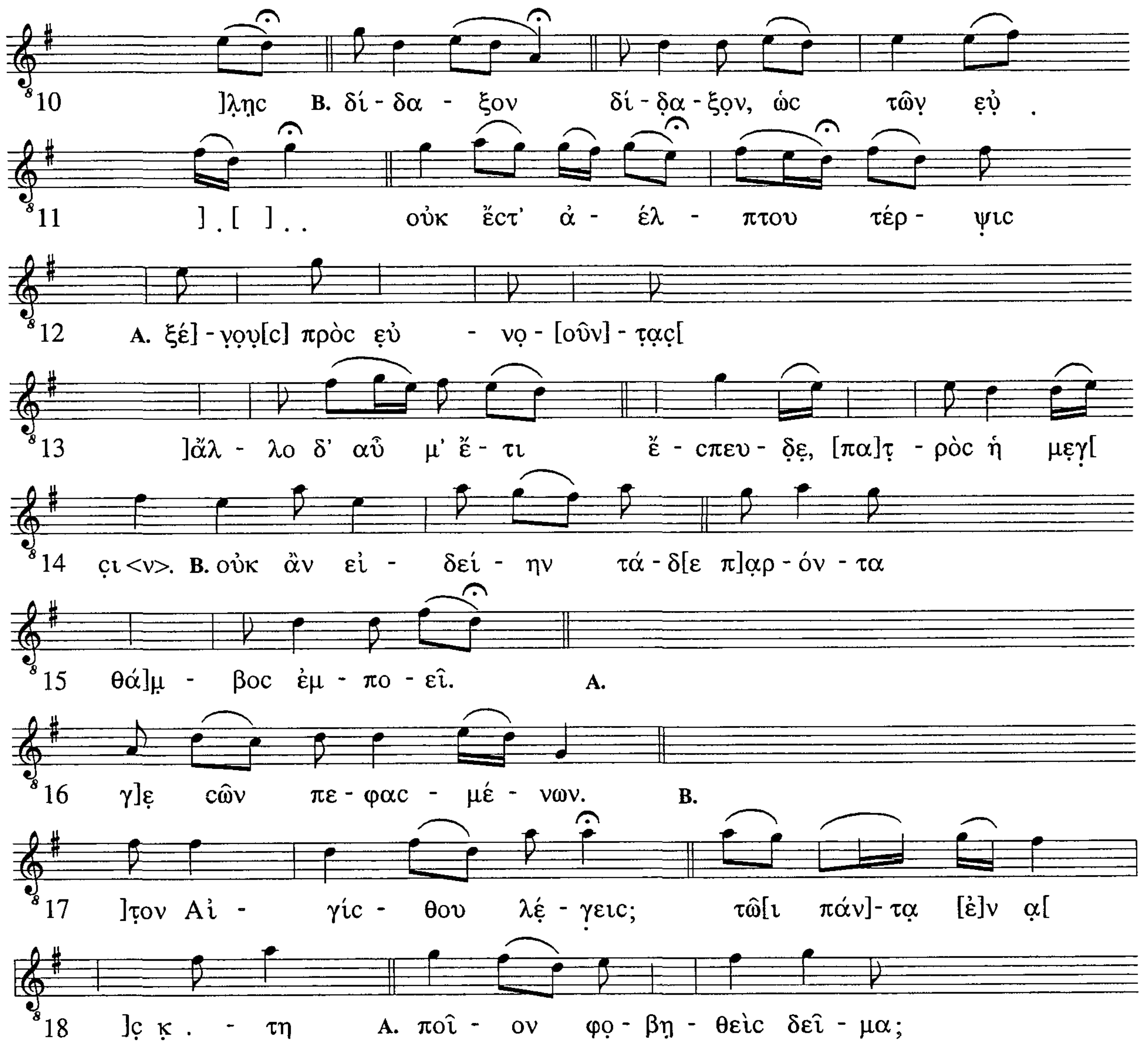
]?[   ]   I   I ȦĪ́
15].BOC EMΠOEI

]Ç   IΞ   I   I   :ZI   Φ
16].CΩNΠE ΦACMENΩN

]   A   Ạ   !   AI   Θ   Θ̇́̄   ΘƱ̣[   ]???   Ʊ   Ạ
17]ṬONAIΓICΘOYΛẸΓ̣EIC   TΩ[   ]TẠ[ ]NẠ[ ]

]? [ ]Ạ   Θ   /   Ʊ̿   AI   Z   ?[   ]A   Ʊ̿   [
18]ÇḲ. A   TH/   ΠΟΙΟΝ ΦỌΒḤΘΕΙC ΔΕΙΜΑ[

Notation 10 Z̄Í pap., Z̄İ Pearl (1965), 180 CṄ Pöhlmann, ?Ẓ Pearl (1965), 180 first Ẓ Koenen 11 Ʊ̣̈́ Ṅ, Ʊ̈́Ẓ, AZ̈́I pap., Ʊ̣̈ Ṅ, Ʊ̈Ẓ, AZ̈I Pearl (1965), 180 12]Ẓ ? Pöhlmann,] ? ? ? Pearl (1965), 181 ? Pöhlmann, Ʊ̣̿ Pearl (1965), 181 13 ƱẒA West, ƱAA Pearl (1965), 181 ? Ʊ̣ Pearl (1965), 181]? Z West !Ż West 14 ẠΘ̣ West, Ȧ Θ̣ Ʊ̣̇ Pearl (1965), 181 ΘƱ West, Θ? Pearl (1965), 181 15]?[pap.,]Ʊ̣[Pearl (1965), 184 ȦĪ West, ȦŹ Pearl (1965), 181 16]Ç Pöhlmann,]? Pearl (1965), 181 Ξ pap., Pearl (1965), 181, Z Pöhlmann (1970), 132 17 Θ̇́ pap., Θ̇̄ Pöhlmann (1970), 132 ? Ʊ Pöhlmann, Ξ̣ Ʊ Pearl (1965), 181 18 A Ʊ̿ pap, ? A Ʊ̿ Pearl (1965), 181.


10]λ̣ης B. δι - δα - ξον δι - δ̣α - ξον, ὡς τῶṿ εὐ̣ .
11].[ ].. οὐκ ἔϲτ' ἀ - έλ - πτου τέρ - ψ̣ις
12 A. ξέ] - ν̣ο̣υ̣[ϲ] πρὸς εὐ̣ - νο̣ - [οῦν] - ṭạϲ̣[
13]ἄλ - λο δ' αὖ μ' ἔ - τι ἔ - ϲπευ - δ̣ε̣, [πα]ṭ - ρὸϲ ἢ μ̣ε̣γ[
14 ϲ̣ι<ν>. B. οὐκ ἂν εἰ - δεί - ην τά - δ[ε π]ạρ - όν - τα
15 θά]μ̣ - βοϲ ἐμ - πο - εῖ. A.
16 γ]ε̣ ϲῶν πε - φαϲ - μέ - νων. B.
17]ṭον Αἰ - γίϲ - θου λέ̣ - γ̣ειϲ; τῶ[ι πάν]- τ̣α [ἐ]ν α̣[
18]ϲ̣ κ̣ . - τη A. ποῖ - ον φο̣ - βη̣ - θεὶϲ δεῖ - μα;

Text 10 λ̣ης or χ̣ης Pearl (1965), 183, ϲ̣ης West `α΄δι ⟦.⟧δ̣αξο̣ν pap. ε̣υ̣. Pearl (1965), 180, ε̣υ̣ or better ε̣ε̣ or ν̣ Koenen 11 [ ].. West,].ε̣ṭ Pearl (1965), 183,].η̣ϲ̣ Kannicht (1981), 273, ε̣ὐ̣|[γενῶν ϲωτηρί]α̣ϲ̣ e.g. West τέρψιϲ | [ἡδίων βροτοῖϲ Snell in Kannicht (1981), 273 12].ο̣υ̣[.]προϲ ε̣υν.[...]ṭα̣ϲ̣ West,].[...]προϲ νυν (end of writing) Pearl (1965), 186 13 ἄλλο δ' αὖ μ' ἔτι Pearl (1965), 184 εϲπευ[ ]δ̣ε̣[πα]ṭροϲημε̣γ̣[West, εϲπευδ̣ε̣ προϲημα.[Pearl (1965), 181, προϲημε̣ṭ[Koenen 14].ι pap.,]ṭι or]ϲ̣ι (e.g. ἔϲτ' ἔ]ṭι) Kannicht (1981), 273,]ϲ̣ι<ν> West τάδ[ε π]αρόντα Pearl (1965), 181, 184 15 θά]μβοϲ or βλ]ά̣βοϲ Pearl (1965), 184, μ̣ or α̣ better than λ̣ Kannicht (1981), 273, παρόντα | [νῦν τὰ δεινὰ θά]μβοϲ Snell in Kannicht (1981), 273, παρόντα| [δ' οὖν ὁρῶν ϲε West 16 γ]ε̣ West 17 Αἰγίϲθου or Αἴγιϲθ' οὐ (or οὗ) Winnington-Ingram (1965), 187, λέγε̣ι̣ϲ (better than λέχο̣ϲ̣) Kannicht (1981), 273 18]ϲκ.α τη Pearl (1965), 181, 184,]ϲ̣ κ̣ρ̣άτη West,]ϲ̣ κ̣ρ̣ατῆι Pöhlmann, δυ]ϲ̣κρ̣ατῆ Kannicht (1981), 273.

Pap. Michigan 2958, edited in 1965 by O. M. Pearl and R. P. Winnington-Ingram,[1] was found with a group of dated papyri from Karanis. The hand would suggest the mid second century AD, and this dating is confirmed by a somewhat later account written on the verso.[2] R. Kannicht revised the poetic text from photographs,[3] and M. L. West has published a new transcription of the music of lines 1–18 (= no. 42).[4] We have re-collated the papyrus with the help of the high-quality digital images which are now available on the Internet;[5] Ludwig Koenen examined some difficult readings on the original.

The right-hand side of a column is preserved together with the right margin. As usual in musical papyri, the poetic text is written in a wide column without regard to verse-division.[6] There is a tendency to leave spaces between word-groups (3 before and after ταδελεγειc), single words, and occasionally syllables (11 α ελ πτου), with the notes or note-groups placed over the gaps, as is done systematically in nos. 8, 17–18, 46, 50, and 55. This means that the number of letters lost in lacunae can only be estimated as a maximum, as the gaps may have contained spacing as well as lettering.

Line 5 consists of musical notes only, probably added after the rest of the text, as they are apparently written with a sharper pen, and lines 4 and 6 are no further apart than 9 and 10. Lines 15–17, on the other hand, are written closer together than the rest, as if the original intention was to write 16–17 without music. Between lines 18 and 19 there is a line with no writing, but 18 ends with an incomplete iambic trimeter, and the five or six syllables needed to complete it very likely stood in the lost left-hand portion of the apparently blank line.

The failure to use the rest of that line may be explained by the hypothesis that what follows (19–26 = no. 43) is a separate item, as the first editors conjectured. This is supported by the fact that the key changes from Hyperionian to Hypolydian. Other differences between the two sections, such as the absence from no. 43 of the diagonal divider (see below), are of doubtful significance, as there is much less text available for comparison. But it is likely enough that we have to do with two items in an anthology of the same sort as that represented by the Oslo papyrus (nos. 39–40) and others, and we present them separately as nos. 42 and 43.

No. 42 is a dramatic dialogue, almost certainly between Orestes,[7] newly returned to Argos, and an old retainer who does not at first recognize him but, on discovering his identity, rejoices. The source may be a post-classical tragedy similar in subject to the *Choephoroi* and the two *Electras.* Changes of speaker are indicated in two places by a large, bold diagonal divider (14, 18). In literary papyri similar oblique strokes are used to mark off cola or sense units.[8] It may be conjectured that the apparent verse-ends in the short lines 6, 15, and 16 also coincided with speaker-changes and that the remainder of those lines was left blank for that reason. Assuming the loss of five to seven syllables in the left-hand portion of each line, the metre is compatible with iambic trimeters throughout, except for the first δίδαξον in 10 and the ῶ̣ φίλτατε in 6, which both seem to be *extra metrum.*[9] Parallels, with interjections, imperatives, and other emotional utterances scanning as an iambic metron or bacchius, occur especially in Sophocles.[10] A similar *extra metrum* word or phrase should perhaps be postulated at the beginning of line 7, if]τωι at the beginning is the end of the first metron of a trimeter. Verse-end is indicated by hiatus and/or *brevis in longo* at 6, 9, and 13.[11] We have other examples of tragic trimeters set to music in nos. 40 and 56. The setting of a dialogue, however, is unique, and raises the question whether a single performer took both parts or two singers collaborated.

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[1] Winnington-Ingram (1965).

[2] Pearl (1965), 179.

[3] Kannicht (1981), 272–5 (Fr. 682 a/b).

[4] West 2 (1992), 314 f.

[5] www.hti.umich.edu/collaboratory/gagos/img/2958.html.

[6] For the width of colums in musical texts see Johnson 1 (2000), 66–8.

[7] Kannicht (1981), 273; West 2 (1992), 315. Pearl (1965), 185, had thought of Agamemnon.

[8] Turner ap. Pearl (1965), 186 n. 2, cited Pap. Berol. 9771 (Eur. *Phaethon*), Pap. Oxy. 1019/2948 (Chariton), Pap. Strasb. WG 304–7 (Eur.). In Pap. Oxy. 413 (Charition mime) the strokes must have a different purpose. For oblique strokes as dividers in musical notation see nos. 49, 53–4, 57; West (1998), 82.

The notes used in the vocal melody are the Hyperionian series Φ Ξ Ι Z A Ʊ Θ (*g c′ d′ e′ f#′ g′ a′*). The additional line of notes between 4 and 6 contains also C (*a*) and possibly a chromatic N (*c#′*). The first editors saw in addition four symbols from the instrumental notation (nos. 5, 6, 12, 13).[12] But study of two transcripts and a photograph which the editors kindly sent to Pöhlmann in 1964 enabled him to read the symbols in question as the vocal notes A Ʊ and Ι A. The obscure traces which the first editors counted as their no. 4, if they are not a colon, may be taken as parts of no. 3, a Ʊ with a high extension, and no. 5, an A. No. 6, another Ʊ, is squashed very flat in comparison with the pointed one at no. 3; this flat form occurs repeatedly in P. Oxy. 2436 (no. 38), and both forms appear side by side in no. 42. 11. These readings yield a melody in the same key as the rest, apart from the doubtful note N.

How this melody relates to its surroundings is difficult to say. Instrumental interludes in other vocal scores (nos. 3, 11, 14–16) are written in instrumental notation; those papyri, however, are some four hundred years earlier. Instrumental notation could even be used for vocal music, as we see from no. 21. Here, perhaps, we have the converse: an instrumental interlude in vocal notation, an interlude which cannot have its place between lines 4 and 6, as the trimeter beginning after the πέ̣λαc with leimma in line 4 and ending with the notes ???Α̣Ϲ̣ in line 6 cannot be split up. The interlude therefore was meant to follow the emphatic ῶ̣ φίλτατε. Perhaps the writer noticed that after this *extra metrum* interjection there was not enough space for the interlude. So he squeezed it in between lines 4 and 6.

There is close agreement of melody and word accents, with circumflexed syllables being set to falling melisms in 7, 13, 15–17. The only apparent clash is in 17, where the natural reading Αἰγίcθου, if the notes are rightly read, suffers a fall on the accented syllable. To avoid this Winnington-Ingram suggested the possibility of articulating Αἴγιcθ' οὐ or Αἴγιcθ' οὗ.[13] But this would seem to involve a breach of Porson's Law, and in any case an address to Aegisthus is hard to reconcile with the situation as reconstructed.

Rhythmical notation is not used with any consistency even in the clearly legible portions, and we must reckon with the possibility of error. All the usual symbols appear: diseme, triseme, hyphen, colon, stigme, leimma. The diseme is not used on all long notes. In groups of two or more notes it is placed indifferently over the first or last or over two together.[14]

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[9] So Kannicht (1981), 273.

[10] See West (1982), 78 with n. 4. For the anticipation of the following word cf. *Phil.* 785 f., 787 f., 804 f.

[11] The mid-line hiatus at the speaker-change in 14 may be emendable with a movable nu if the first letters are]cι (dative plural or verb ending).

[12] Winnington-Ingram (1965), 188.

[13] Winnington-Ingram (1965), 187 n. 2.

[14] Winnington-Ingram (1965), 190 f.

What looks like a triseme appears in many places.[1] In some of them it could be taken as a ligature of the normal diseme bar with an arsis-point over it, but this explanation does not seem possible in line 11, 15, or 17. In 11 the bar is clearly bent upwards at an oblique angle, as in no. 39/40, and there is an arsis-point in addition. In 15 and 17 there is a bar with point, and the oblique extension is added as a separate stroke. In 11 and 15 the sign stands over hyphenated two-note groups: as Winnington-Ingram notes, it is a question whether a triseme can be so placed, and what it will signify.[2] It cannot be accidental that all the instances except the second and third in line 11 occur at trimeter-end: we found just the same phenomenon at the ends of trimeters in no. 40,[3] and it must represent a rhythmical convention followed in trimeter settings at this period, a fermata or rallentando at the end of each verse. The two residual instances, on the long syllables of ἀέλπτου in 11, both of which have melisms, must be taken as marking an agogic distortion to which the composer subjected this word for greater emotional effect.

The question is bound up with the use of the leimma. This appears especially at verse-end (4, 8?, 9, 10 twice, 11), always with stigme, sometimes following a note marked as triseme, sometimes with its own diseme bar. In these cases it presumably signifies a pause; there may be no significance in its presence at some verse-ends and absence from others.[4] The other places where it occurs are in lines 1, 3, and 13. In 1 and 13 it is an element in melisms on the circumflexed words ῶ̂ and αὖ̂, and presumably represents a lengthening, not a pause: Α Ζ ∩ = ♫ , Α ∩ Ʊ Ζ = ♩ ♫ . In 3, where the leimma is appended to a single triseme note in mid line, its significance is obscure.

The hyphen is recognizable in many places, including two where a syllable is set to three notes (7, 11), the rhythm to be interpreted as ♩ ♫ or ♫ ♩ . In at least two other places (9; 11, perhaps twice; perhaps 7) the hyphen links two notes set to a short syllable; as in nos. 39/40 and 59, this is to be understood as ♫ . Often, however, the hyphen is absent, even in places where the papyrus is clearly legible.

The colon is certainly attested in 16, preceding two unhyphenated notes set to a short syllable: these are again to be interpreted as ♫ . There may be another example in the 'song without words' of line 5.

The employment of stigmai is only intermittently intelligible. In line 2 we can recognize iambic metra pointed ∪ - ∪̇ -̇. But often, especially before and after the leimma sign (which is always pointed), there appear accumulations of pointed notes such that error must be assumed. Thus in 4 we find four consecutive stigmai and in 11 five. On the other hand, from line 13 on they become noticeably rarer (as does the leimma). They cannot, therefore, be relied upon for guidance as to the metre.

No. 42 is a combination of peculiarities: iambic trimeters set to music (see nos. 40, 43 ?), change of speaker indicated by oblique strokes (line 14, 18) or new line (line 15, 16), interjections *extra metrum* (line 6, 7 ?, 10), and last not least an instrumental interlude in vocal notation (line 5), which was meant to be sung between two *extra metrum* interjections (line 6, 7 ?). Such a complicated structure is best understood by an arrangement of the supplemented text in trimeters, as follows:

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[1] Lines 6, 9, 10, 11 (three times), 15, 17, 21; discussed at length by Winnington-Ingram (1965), 190 f.

[2] Winnington-Ingram (1965), 191.

[3] See above, p. 131.

[4] Note that it does not appear anywhere after line 13, although there are four identifiable trimeter-ends in 15–18.

No. 42 arranged in iambic trimeters with supplements

A. = 'Ορέcτηc, B. = Οἰκέτηc

1 A. ῷ̣ φίλτα̣τ' [ο]ι̣κετῶ[ν cὺ πατρώιων ἐμοί.
B. ἀ]τ̣[ὰ]ρ̣ τίc εἶ ποτ̣' ἢ τίνοc νέ̣ον̣ [θάλ]ο̣c̣;
A. ['Αγαμέμνονοc. B. παίζω]ν̣ τ[ι] ἢ̣ π̣ῆ<ι> τάδε λ̣έγειc;
A. πότ . . . [. . .]ο̣ν̣[τ]ὸ̣ν̣ πέ̣λαc
5 πάντη<ι> c' 'Ο̣ρ̣έ̣c̣τα .μ̣οcικ[. .] . .ο[. . .] . . . . .
B. ῷ̣ φίλτατε (following line 5: instrumental interlude)
(interjection *extra metrum*)
× – ∪]τ̣ωι c' ἀνε̣ῖ̣π̣α. [πῶ]c̣, φράcον φρά[cον,
τοίων ὑπ' ἐχθρ]ῶ̣ν̣ ἐ̣γένεθ' ἡ cωτη̣ρία;
10 τίc νόcτο̣c̣ [– × – ∪ –] γῆc δεῦρό μοι
ἐ̣κ̣ [τῆc] φανείcηc [Λοξίου ποτ ' ἐντο]λ̣ῆc;
δίδαξον,
δίδ̣αξο̣ν, ὡc τῶν̣ ε̣ὐ̣[γενῶν cωτηρί]α̣c̣
οὐκ ἔcτ' ἀέλπτου τέρψ̣ιc [ἡδίων βροτοῖc.
15 A. ξέ]ν̣ο̣υ̣[c] πρὸc ε̣ὐνο̣[οῦν]τ̣α̣c̣ [ἐκκλέψαcά με
τροφὸc Κίλιcc' ἔcωcεν·] ἄλλο δ' αὖ μ' ἔτι
ἔcπευδ̣ε̣, [πα]τ̣ρὸc ἡ με̣γ̣[αcθενὴc ἀρά
cὺν θεοῖc ἄπα]c̣ι<ν>. B. οὐκ ἂν εἰδείην τάδ[ε·
π]α̣ρόντα [δ' οὖν ὁρῶν cε, θά]μ̣βοc ἐμποεῖ.
20 A. [θάρcει νυν, ὡc φίλων γ]ε̣ cῶν πεφαcμένων.
B. [κίνδυνόc ἐcτι. A. μὴ] τ̣ὸν Αἰγίcθου λ̣έ̣γειc ;
B. τῶ[ι πάν]τ̣α̣ [ἐ]ν α̣[ἰχμῆι, καὶ cτέφει φρουραῖ]c̣ κ̣ρ̣άτη .
A. ποῖον φο̣β̣η̣θεὶc δεῖμα; [B. θάνατον ἐκ cέθεν.]

No. 43 PAP. MICHIGAN 2958 lines 19–26 Second century AD

] Ȯ Ƶ̄̇[ ]Φ̣[ ] Ƶ O O͜Ƶ O?
19]C̣I Ω TITINE ΠI TO [.]OṆ[

] C O Φ̇ Ƶ̣[
20]A ΓNΩ MHN Π̣ẠṬ[

]Ċ̣ R̄́∩ İ [ ] Ẓ![
21].NOC CA ΦΩ̣C ṬỌ.[

] Φ̄̇ Ċ C̄ [ ]? ? OC[
22]ON ΠAPOC Ḳ[. .]. .KON Ạ[

]?ϴ Z ?Ʊ̣ ? ?⟦?⟧ ? [
23]. Ḥ TON KAKIC TON.[

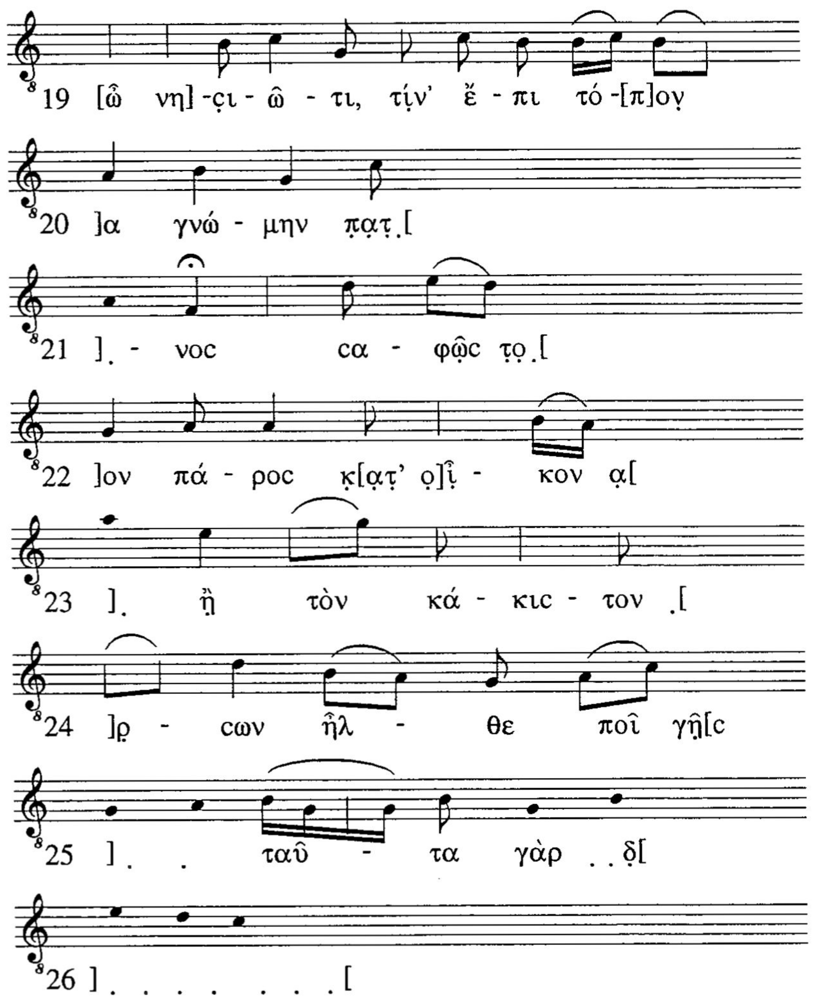
] ‿? !̄ O‿C Φ C̣ Ƶ̣ [
24]P̣CΩN HΛ ΘE ΠOI ΓḤ[

]Φ C̣ Ȯ͡Φ̇?Φ O Φ Ọ[
25]. . TAY TA ΓAP . .Δ̣[

]Ẓ ! Ƶ̣ ? [
26]. . . . . . .[

Notation 19 Ō̇ pap., Ȯ corr. Pöhlmann Φ Pöhlmann,]?[Pearl (1965), 181 O͜Ƶ West, Ƶ Pearl (1965), 181 21 R̄́ pap., R̄̇ Pearl (1965), 181 ∩ West (∩̇ possible), Ọ Pearl (1965), 184 22 Φ̄̇ Pöhlmann (1970), 134, Φ̄̇̇ pap. C̄ pap., C̄̇ Pearl (1965), 182 OC Pöhlmann, O̅C̅ Pearl (1965), 184 23 ϴ West, O Pearl (1965) 182 Z Pöhlmann, Ƶ̣ Pearl (1965), 184 ?Ʊ̣?? West, C?͜? Ọ Pöhlmann (1970), 134 24 ‿? Pöhlmann, Ọ Pearl (1965), 182 O͜C West, OC Pearl (1965), 182 25 C̣ or Ọ̇ Pearl (1965), 182, 184 Ȯ Pöhlmann, O Pearl (1965), 182 O͜Φ̇?Φ or OΦ?͜Φ Pearl (1965), 182, 184.

For details of the papyrus, and the reasons for treating lines 19–26 as a separate item, see above on no. 42. No margins are preserved in this portion of the text. The subject matter is quite unclear. Dialogue may be suggested by questions in 19 τίν' ἐπὶ τόπ[ον and 24 ποῖ γῆ[c. Somebody seems to ask a female islander ([ὦ νη]ςιῶτι) about the particulars of the place. Perhaps no. 43 is again (see no. 42) the beginning of a tragic prologue.


19 [ὦ νη]-ςι - ῶ - τι, τ̣ί̣ν' ἔ - πι τό -[π]ο̣ν̣
20]α γνώ - μην π̣α̣τ̣.[
21]. - νος σα - φῶς τ̣ο̣.[
22]ον πά - ρος κ̣[ατ' ο̣]ι̣ - κον α̣[
23]. ἢ̣ τὸν κά - κισ - τον .[
24]ρ̣ - σων ἢλ - θε ποῖ γῆ̣[ς
25]. . ταῦ - τα γὰρ . .δ̣[
26]. . . . .[

Text 19 [ὦ νη]ς̣ιῶτι, τ̣ί̣ν' ἔπι τό[π]ο̣ν̣[Pöhlmann (1970), 134, το.[. .]οι[Pearl (1965), 181 20 π̣α̣τ̣. Pearl (1965), 184 22 κ[άτο]ι̣κον Pöhlmann (1970), 134 23 κιc Pearl (1965), 182, Koenen 24 ποιγη̣ Pearl (1965), 182, ποιγα̣ρ̣ Koenen, ποῖ γῆ̣[c Pöhlmann (1970), 134, cf. Soph. *Trach.* 984 25]. . Pöhlmann,]cα Pearl (1965), 182 ταυτ⟦α⟧α pap. . .δ̣ West, . .δ̣ or .π̣α̣ Koenen, ο̣ρ̣α̣ Pearl (1965), 182.

The metre looks iambic or trochaic, but the hypothesis of iambic trimeters (as in no. 42) cannot be confirmed. The melody uses the Hypolydian note-series R Φ C O Ƶ I Z Ʊ ϴ (*f g a b c′ d′ e′ g′ a′*). There is close agreement of melody and word accents, with the exception of the rising melism (if correctly read) found on ποῖ line 24. Rhythmical notation is confined to sporadic disemes, with a triseme plus leimma in 21 probably marking verse-end; a couple of hyphens; and a few stigmai. A noteworthy melism of four notes (if correctly read) is found on ταῦ(τα) line 25 (cf. nos. 42 line 7, 49 line 4, 57 line 2).

No. 44 PAP. OXY. 3704 Second century AD

Fr. 1→

1] . α ι̣[

]Ʒ̣ C [ ] ? ?[
2].[. .]ε̣ β̣ α̣ λ̣[.]ο̣ ϲ̣ υ ν α̣ ι̣ μ ο ϲ ε μ[

]Α̣ Ị̇ Ζ̣ ?∩̣ İ′ Ʊ C̄ Ż İ [
3]ε̣ κ̣ ε̣ ν̣ ε̣ υ̣ ε̣ . . . α ν ο μ ω χ ε ρ ι φ[

]?   ? Φ̣̇ Φ – Ċ Ż̄ Ʒ̄ Ʒ ׀ [
4].[. . .]ν̣ α ϲ̣ ε ρ ε ι̣ ν υ ω ν ο υ κ ε ν ο τ̣[

]? [ ] ? Ʒ̣̄ Ị̇ Ż İ̄ Z ׀ Ʒ̣[
5].[. . . .] . ο υ φ ο ν ι ο ν θ η ρ α τ ι τ̣[

]   C̄̇   Ō :OƷ Ʒ̇[Ō] ?[
6]ο̣ ι ο υ φ ε ι ϲ α μ ε ν ο ϲ δ̣[

Fr. 1↓

1]α λ α μ[

]? Φ̣̇ Ʒ̄[   ]‿[   ] ? [
2] . μ ε̣ λ̣ ε α ν̣ δ ε ν δ ρ̣ ω ϲ η ε̣ κ δ̣[.] . [

] Z Z/Ʒ̇ İ Ẓ̇׀ Ʒ̇ O Ʒ̣ Ī Ż ? Ȯ[
3]ι δ ι̣ ω γ ε ν ε τ η γ ε τ̣ α μ η μ ε ν ο ν[

]Ọ Z Ç̇ Ẓ̄ ∩̄ ?Ọ̄′ İ Ị̇̇ Ȯ[
4]ξ ϲ κ ο π̣ ε λ ω ν ε ξ ε θ ο ρ ε ν̣ φ ο[

]   ?̄∩̇ Ʊ Ō̇′ Ʊ̄ : [ ] Ʒ̄′[
5]ϲ̣ ι̣ κ̣ ε λ ω ν ε ξ α ν τ ρ ω[.]η λ θ ε[

]? Ʒ̣̄ ∩̇Ɛ̣ Ʊ̄ Ō′∩̇Ō′ [
6]ϲ̣ τ η ρ η τ υ φ ω ϲ η ϲ κ . [

Fr. 2→

] Ị̇′ ?[
1] η α . [.] . ε ι η[

] ?̄ Ʊ̄̇[ ] [
2] . κ υ π ρ ι [

]   [
3] . [

Fr. 3→

]Α̣[
1] . ο τ α ν[

]A [
2]α̣ ξ ε̣ μ̣[

]Α̣ A‿[
3].[

Fr. 2↓

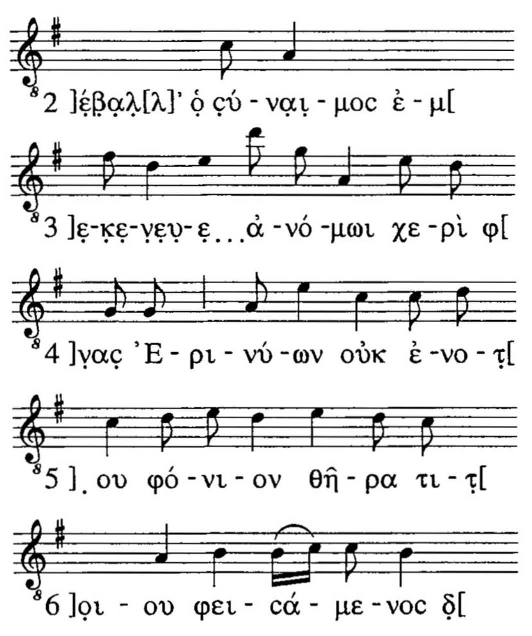
] Ẓ[
1]ο̣ λ̣ .[

]Ç [   ]?̄Φ̣∩[
2] . α . [. .] . c α̣[

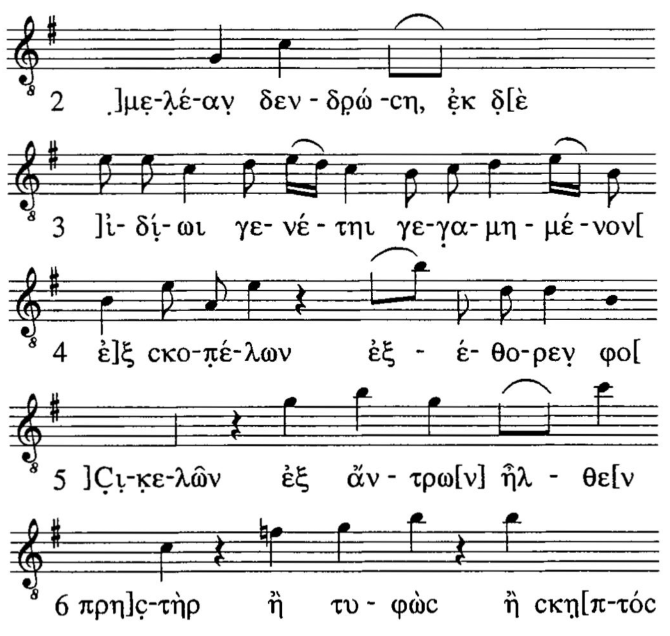
]Ç ? ? [
3]ε ν̣ ε κ ε ν[

] Ʒ̣ ? ? [
4 .   .   .

Fr. 1→


2]ἐβα̣λ̣[λ]' ὁ̣ ϲύ - να̣ι̣ - μοϲ ἐ - μ[
3]ε̣-κε̣-νε̣υ̣-ε̣...ἀ -νό -μωι χε -ρὶ φ[
4]ναϲ 'Ε - ρι - νύ -ων οὐκ ἐ -νο - τ̣[
5] . ου φό - νι - ον θῆ - ρα τι - τ̣[
6]ο̣ι - ου φει - cά - με -νοϲ δ̣[

Fr. 1↓


2]με̣-λ̣έ-αν̣ δεν - δρ̣ώ -cη, ἐ̣κ δ̣[ὲ
3]ἰ- δί̣- ωι γε- νέ - τηι γε-γα̣- μη - μέ -νον[
4 ἐ]ξ cκο-π̣έ-λων ἐξ - έ- θο-ρεν̣ φο[
5]C̣ι̣-κ̣ε-λῶν ἐξ ἄν - τρω[ν] ἦλ - θε[ν
6 πρη]ϲ̣-τὴρ ἢ τυ - φὼϲ ἢ ϲκη̣[π-τόϲ

NB: Haslam = Haslam 1 (1986).

Fr. 1→ *Notation* 3 Α̣ West, Z or Ʊ Haslam, 43 next note possibly Ʒ̣ ∩̣ West, Ọ Haslam, 43 C̄ or C̄̇ 4 Φ̣̇ West, Ç̇ Haslam, 43 5 Ʒ̣̄ West, Z̄ Haslam, 43 Ʒ̣[West, Z[Haslam, 42 6 [Ō] West (small note), [̄] Haslam, 42.

Text 2 ε̣β̣α̣λ̣[λ] West, ε̣β̣ι̣μ̣ . Haslam, 43 ὁ ϲύναιμοϲ ἐμ[οί Haslam, 43.

Fr. 2→ *Text* 2 Κύπρι Haslam, 42 (as the line is not filled out).

Fr. 3→ *Notation* 1 Α̣ West, ? Haslam, 44 3 A‿[West, A[Haslam, 44.

Fr. 1↓ *Notation* 3 Ị̇ Ẓ̇׀ West, ?̄ Ị̇ or ?̄ Ʒ̣̇ Haslam, 43 Ȯ West, Ō Haslam, 43 4 Ẓ̄∩̄ ? Ọ̄′ West, ∩̄? Haslam, 43 Ị̇̄West, ?̄ Haslam, 43 6 [West, ?[Haslam, 43.

Text 3 ἰδίωι γενέτηι γεγαμημένον Haslam, 44 6 πρη]ϲ̣τὴρ ἢ τυφὼϲ ἢ ϲκη̣[πτόϲ Haslam, 45.

Fr. 2↓ *Notation* 2]?̄Φ̣ West,]??? Haslam, 44.

These three fragments, two of which have music on both sides, were published by M. W. Haslam in 1986, and M. L. West has presented a new transcription of fr. 1.[1] He has recollated the papyrus for the present edition. A lower margin is preserved in fr. 1 (both sides), and apparently a right-hand one in fr. 2→. The writing is assigned to the second century, with the musical notation perhaps added by a different hand. It is not clear whether the scraps come from a codex or a single sheet. If the latter is the case (as is perhaps more likely), it is possible that all the fragments belong to the same composition. At any rate they are all in the same notation-key and register, and the texts on the two sides of fr. 1, at least, are linked by metrical and thematic similarities. The content appears to be mythological, with narrative tenses in fr. 1↓ 4–5, but also some possible indications of direct speech (fr. 1→ 2 ἐμ[οί?; fr. 2→ 2 Κύπρι).

The notes represented are Φ C O Ƶ I Z A Ʊ O′ Ƶ′ I′ (*g a b c′ d′ e′ f#′ g′ b′ c′′ d′′*), a segment from the Hyperionian scale and one exharmonic E (*f#′*)[2] with a wide compass (an octave and a fifth) and an exceptionally high pitch register: only no. 17, which is a soprano setting, goes higher. At fr. 1→ 4, over the syllable ρει, we find a horizontal dash instead of a note; similar dashes appear in no. 48, line 3. In both places they appear between successive notes of the scale (Φ – C = *g* – *a*; E – Δ = *f′* – *f#′*), which suggests the possibility that the dash signified either a passing-note of intermediate pitch[3] or a *portamento* glide from the one pitch to the other.

There are several melodic leaps of a fifth or more, sometimes contrary to the word accent.[4] There is not much division of syllables between two notes, but in three places a short (and accented) syllable is so divided (fr. 1→ 6, 1↓ 3 twice). These melisms are, as usual, marked indifferently by dicolon or hyphen. Long notes are often but not always marked with a diseme. In fr. 1↓ 4–6 there are several diseme leimmata which evidently denote pauses; leimmata also at fr. 1→ 3, 2↓ 2.

The metre of the fragments is generally consistent with anapaests, a popular metre in the Roman period.[5] Only fr. 1→ 4 ’Ερινύων appears to conflict with this, but Haslam observes that it might be scanned ⏑––, as at Eur. *I.T.* 931, 970, 1456, in spite of the fact that νυω is set to two separate notes.[6] The diseme rests marked by the leimmata at fr. 1↓ 4–6 each replace the first biceps of an anapaestic metron, a phenomenon seen also in no. 59. The placing of stigmai is partly but not wholly in accord with an anapaestic analysis.

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[1] Haslam 1 (1986), with photographs; West 2 (1992), 316.

[2] The absence of ϴ (*a′*) is probably fortuitous.

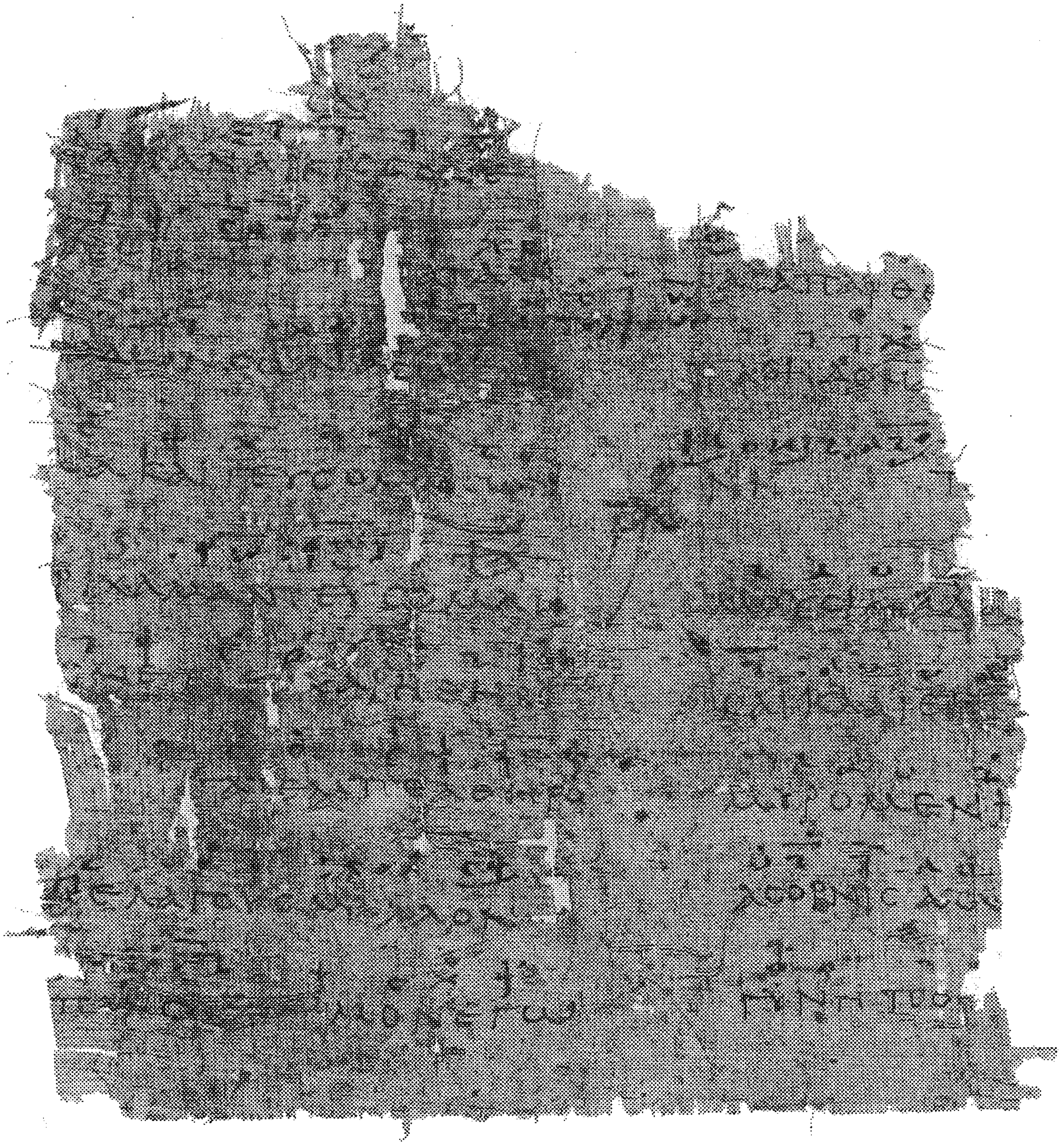
[3] In no. 48 this would involve quarter-tone intervals. See also p. 20.

[4] Fr. 1→ 3 ἀνόμωι, 4 ’Ερινύων; 1↓ 4 cκοπέλων, if the notes are rightly read.

[5] West (1982), 170–2.

[6] Haslam 1 (1986), 42.

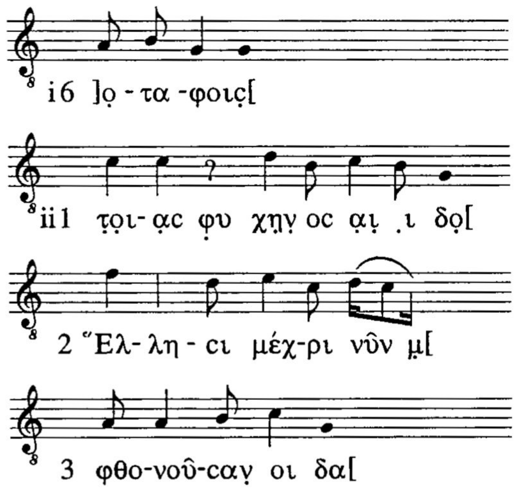
FIG. 17: Pap. Yale CtYBR Inv. 4510 (see above no. 41, p. 134–7)

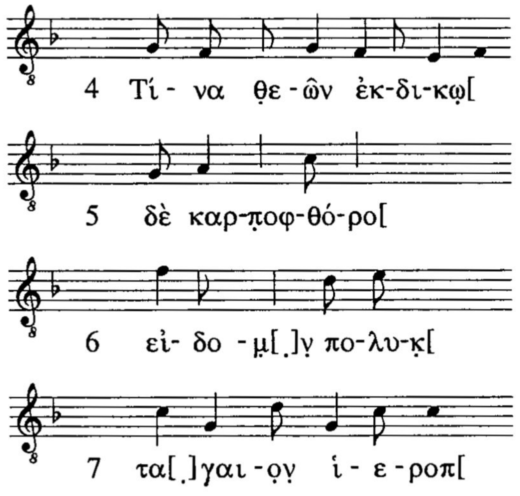


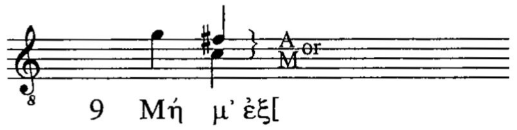
No. 45 PAP. OXY. 4461 Second century AD

	Col. i	Col. ii
1	]].[].	Ƶ Ƶ ? I Ȯ Ƶ O Φ[τ̣ο̣ια̣cφυ̣χη̣ν̣οcα̣ι̣ . ιδο̣[
2	] Ʊ Θ]. λει̣ .	Ė ? İ Z Ƶ̇ :IƵ∩?[ελληcιμεχρινυνμ̣[
3	]]ε̣	Ċ C Ȯ Ƶ Φ̇[φθονουcαν̣οιδα[
4	]] [	Φ R[ ] Φ̄̇ R İ̷ ⅂ R[ ]τινα . εωνεγδικω̣[
5	] [ ]τ̣οπ̣τ̣ε̣ρ̣ο̣[	Φ C̄̇[ ]?̇ M ?[δεκαρπ̣οφθορο[
6	]? ĊȮΦ Φ[ ]ο̣ταφοιc̣[	E ?̊[ ]?̄̇I Ż [ειδομ̣[.]ν̣πολυ.[
7	] ⱶ O ?[ ]ομ̣ο̣.[	M̄ Φ I Φ̄ṀM [τα[.]γαιο̣ν̣ϊεροπ[
8	]Θ[ ]δ̣ιο̣[ ]Ƶ??[	? ? ?̇ ? ?̇[ ]M̄̇[τ̣ο̣[. . .]λ̣ιc̣[.(.)]α[[ ].[
	. . .	
9		Ʊ A[μημεξ[[
10		? [.[

Notation i 6]? perhaps C ii 1 Stigmai may be lost above the first, third, and seventh signs 5]?: like a Z but with the bottom stroke zooming up as a long rising diagonal, above which is a stigme ?[: compatible with the tip of another M 6 The E is uncertain. Then something similar to the Z-diagonal described at 5, again with stigme; then possibly E 7 Of I only a foot turned to left (P etc. are also possible) 8 Above λ̣ι, perhaps Z or Π 9 A: or half of M 10 *prima facie* Ψ.


i6]ο̣-τα-φοιc̣[
?
ii1 τ̣ο̣ι- α̣c φ̣υ χη̣ν̣ οc α̣ι̣ .ι δο̣[
2 Ἕλ- λη - cι μέχ-ρι νῦν μ̣[
3 φθο-νοῦ-cαν̣ οι δα[


4 Τί - να θ̣ε - ῶν ἐκ-δι-κω̣[
5 δὲ καρ-π̣οφ-θό-ρο[
6 εἰ- δο -μ̣[.]ν̣ πο-λυ-κ̣[
7 τα[.]γαι -ο̣ν̣ ἱ - ε -ροπ[



Text i 6 e.g. κ]ροτάφοιc,]ο τάφοι(c) ii 1 τ̣ο̣: possibly τ̣α̣ φ̣: ψ unlikely 2 Ἕλληcι μέχρι νῦν 3 φθονοῦcαν οἶδα (οἶδαc, οἴδαc') or οἳ δ' α-, etc. 4 τίνα θ̣εῶν ἐγδικω̣[, i.e. ἐκδίκ- 5 δὲ καρποφθόρο[6 Possibly πολυκ̣[αρπ- 7 ἱεροπ[οι-, ἱεροπ[ρεπ-? 9 ξ[: β may be possible; μή μ' ἐξ[, μή με β[?

First published by M. L. West;[1] see there for photograph and more detailed notes on the text. The fragment seems to consist of separate excerpts. The beginnings of new excerpts are marked at lines 4 and 9 of col. ii by ecthesis and by wider gaps separating these from the preceding lines. In the space between the text of 8 and the notation of 9 there seems to have been further writing, possibly a heading or subscription.

Not enough of the poetic text is preserved to establish the nature of the pieces, though ii 9 looks like a dramatic plea of some sort, and ii 4 (τίνα θεῶν ἐκδίκω[ν 'which of the avenging gods'?) would suit the same type of composition; both lines are beginnings of excerpts. ii 1–3 (end of excerpt) may have been in iambic trimeters, provided that the υ in 1 is short (which will rule out ψυχήν). The scansion of μέχρι in 2 is ambiguous, but the stigmai imply that the word is divided between thesis and arsis, i.e. the first syllable is long.

The separate excerpts are notated in different keys. The preserved notes in col. i 2 are compatible with Hyperionian, Lydian, or Hypo- or Hyperlydian, those in i 6–9 with Hyperionian or Hypolydian; those in ii 1–3 are Hypolydian; those in ii 4–8 are Lydian; those in ii 9 are Ionian or Hyperionian if the second note is read as A, Lydian or Hyperlydian if it is read as M. All are diatonic.

These statements are subject to the caveat that unfamiliar note symbols appear at i 7 and ii 4, in each case a vertical with a stroke branching up to the right from its foot. Though not similarly made, both are perhaps to be identified with the symbol ɭ, rather resembling a modern quaver with a long tail, which appears six times in no. 56 and which is hard to equate with any of the signs listed by Alypius. The same sign now appears also in no. 49, i 4. The prevailing key in each case is Lydian or Hypolydian. West's suggestion that the sign represents K must be abandoned as neither musically nor palaeographically satisfactory. Inverted A remains a possibility but would still involve musical anomalies.[2] The problem awaits a more convincing solution.

The identifiable notes of the fragment fall in the range *e–a′*. The preserved sequences are too short for tonal centres to be identifiable. The widest intervals that appear are the falling fifths in ii 7 and (if Lydian) 9. The only division of a syllable between two notes is at ii 2 νῦν. It is marked with the double point preceding the notes; the leimma following the Ξ indicates the prolongation of that second note in the group, i.e. the rhythm ♫♩.

The normal principles relating melodic line to word accent appear to be breached at least in ii 3, where the last syllable of φθονοῦcαν is on a higher note than the accented syllable.

Application of the stigme is not perspicuous throughout. In i 6 (double-short rhythm) and ii 1–3 (iambic) it marks the arsis (in the ancient sense of the up-beat), as it is supposed to, but in the following lines, where the metre is obscure, no recognizable pattern emerges. In these lines diseme symbols are used on at least some long notes, whereas in the preceding excerpts none is to be seen.

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[1] West (1998), 83–5.

[2] West 1 (1992), 15.

No. 46 PAP. OXY. 4462 Second century AD

Fr. 1

] ? [
1]̣ιc[

] Ξ′Ο′ Ο′Ξ′Ο′ Ο′ ?′ Γ [
2]ε̣c[.]ω κο cμ ̣ c̣υ μ̣[

] [ ] Ζ Ι[ ]Ζ Ι[
3]ν θοc̣ ̣ τερπε̣α λα[

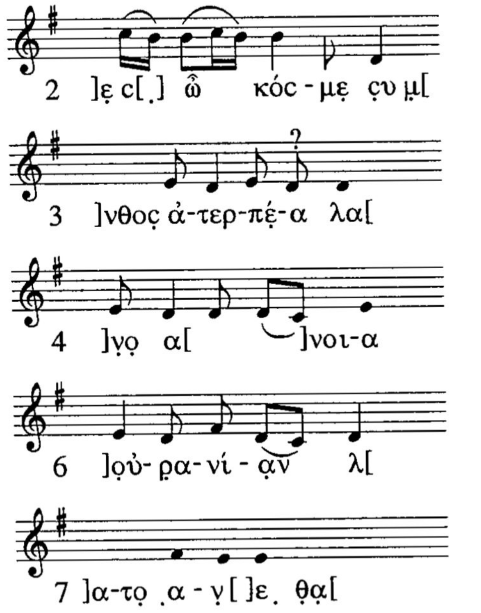
]Ζ Γ Ι ΙΞ λ̣α̣ Ζ ? [
4]ν̣ο̣ α[ ]νοι α [

]? [ ]? Λ̇ ?[
5]αι ον̣[ ] ̣ γω̣ν[

]Ζ Ι Α :ΙΞ Ι̇ [
6]ο̣υ ρ̣α νι α̣ν .λ[

] Α Ζ̇Ζ [
7]ατ ̣ ̣ αν̣[ ]ε ̣θ̣α̣[

] Α[ ]Α [
8]ο[ ] ̣ο̣ι̣[ ] ̣[ ] ̣[



Fr. 1 *Notation* 2 The dashes marking the higher octave are mostly lost; clearest on the Ο′ above κο. Above c̣υ what looks like a Γ with a short stem and a long crossbar bent down at the end. The same symbol appears to recur in line 4. As Γ is alien to the key, an alternative interpretation must be sought. The only possibility seems to be Ī, that is Ι with diseme attached at the side; there is an example presenting a similar appearance in the manuscript C of no. 25, over Δήλιε (see *pl.* 5). However, no disemes are preserved in these fragments otherwise 3 Ζ uncertain both times 4 The first Ζ uncertain 5 Λ: or Α 6 Ζ, the first Ι, Α, and Ξ all uncertain. Above the punctuation point, Ι surmounted by a long rising diagonal mostly to the right, and above that a stigme.

Text 2 Apparently c [ὲ] or c[ὺ] ὦ κόcμε̣, c̣ὺ (or ο̣ὐ) 3 The notation points to a vowel after]νθοc; ἀτερπέα likely 4 Above νοι what looks like λ̣α̣ at a lower level than the musical notation 5 Perhaps]αιον̣ ἄγων 6 οὐρανίαν.

Fr. 2

]Ι̮   Ι[
1]ε νοι[

]   Χ[
2]. . ν̣α τε[

]?[]ΟΛ̇ :[
3]ω̣ν δ .[

] Α   ΑƱ̮[
4]ν κ[.]α δι̣[

]Ƶ Λ̇ Α̮Ι [
5]ε̣ ου τ̣[

]?[

Fr. 3

1]κ . [(.)] .[(.)]α̣[

] ?   [   ] ? [
2]κ̣πε .[. (.)] . (.) ε̣ c̣α̣ μ̣[

]Α̮Ι Ʊ [
3]ι̣α χυ θο cα[

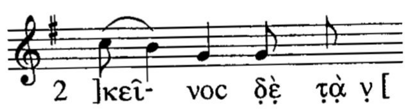
]   [
4]   [

]? Ο̇ Ο [
5]ε̣ν ο δοι π̣[

Fr. 4

] [ ]Ι [
1]α̣ εc αυ λιc̣[

] :ƵΟ΄Λ̇ ƱƱ [
2] κει νοcδ̣ε̣ τ̣[]α̣ ν̣[



Fr. 2 *Notation* 2 No sign of a note over να X uncertain 3]?[: the hooked top of a tall ascender, e.g. Φ 5 The Ƶ uncertain.

Text 4 ι̣[or η̣[E.g. κ[λ]αδί̣, κ[ρ]αδί̣[α(-), κ[ρ]αδη̣[(-φορ-).

Fr. 3 *Text* 3 Most likely δ]ιάχυθ' ὅcα or ὁ (ὃ) cα- 5 ὁδοιπ[ορ-.

Fr. 4 *Notation* 1 Ι uncertain, only a trace of a foot.

Text 1 ἐc αὔλιο̣[ν or αὐλιc̣[μ - etc. 2 Apparently (ἐ)]κεῖνοc δ̣ὲ̣ τ̣ὰ̣ ν̣[.

Fr. 5

]Ζ [
1] ν[

]Ʊ [
2]. ο μ[

] [
3]χ[

Fr. 5 *Notation* 1 and 2 Traces, readings doubtful.

First published by M. L. West;[1] see there for photograph and more detailed notes on the text. Five exiguous fragments, in all of which only three or four complete words can be identified. It is unclear whether more than one composition is represented. For the most part the syllables are spaced out from one another to make the allocation of notes clearer. Between words there are sometimes wider spaces, and in one case (fr. 1. 6, possibly also 5) there is a low point in the middle of these spaces; this perhaps corresponded to a metrical or syntactic break. Syllable-spacing is also found in nos. 8, 17/18, 42/43, 50, and 55. The musical notation may be in the same hand as the main text.

Fr. 1. 2 suggests verses of a philosophical or religious cast. The vocative (ὦ) κόcμε is paralleled in Marcus Aurelius (4. 23. 1) and a couple of times in the poems of Gregory of Nazianzus.

The key in these fragments is the Hyperionian. The notes come from the range *b# - b#'*. This is a higher tessitura than the average, corresponding closely to the νητοειδὴc τόποc φωνῆc defined by Anon. Bellerm. 64.[2] A tenor voice was called for.

There is a possibility that vowels stand in hiatus in fr. 1. 2 (before ὦ, and again after κόcμε if οὐ not cύ followed), 1. 4 (if e.g. κεῖ]ν̣ο̣ α[), and 2. 5. In some other musical papyri of this period we find instances of vowels which would normally be elided being set to a separate short note and accordingly written in *scriptio plena*: nos. 38 ii 3, 40. 16, 49 ii 3.

Melisms are usually marked by means of the hyphen (fr. 1. 2, 6; 2. 1, 4, 5; 3. 3); in fr. 1. 6 there is also a double point, and in fr. 4. 2 perhaps a double point alone. The diseme sign occurs only doubtfully (see above on fr. 1. 2), and the stigme only sporadically.

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[1] West (1998), 86–9.

[2] As restored in West 1 (1992), 35.

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] Ƶ |Ƶ̮ C [
1]δηcωλε[

]C Ī Ƶ [
2]ηcτραcυν[

]Ƶ Φ C OC̄[
3]δωκεριφυ[

] ? [ ]⁻Z ¬ ¬ΦC̮ C?[
4]π̣αιδαcποτεβακχ[

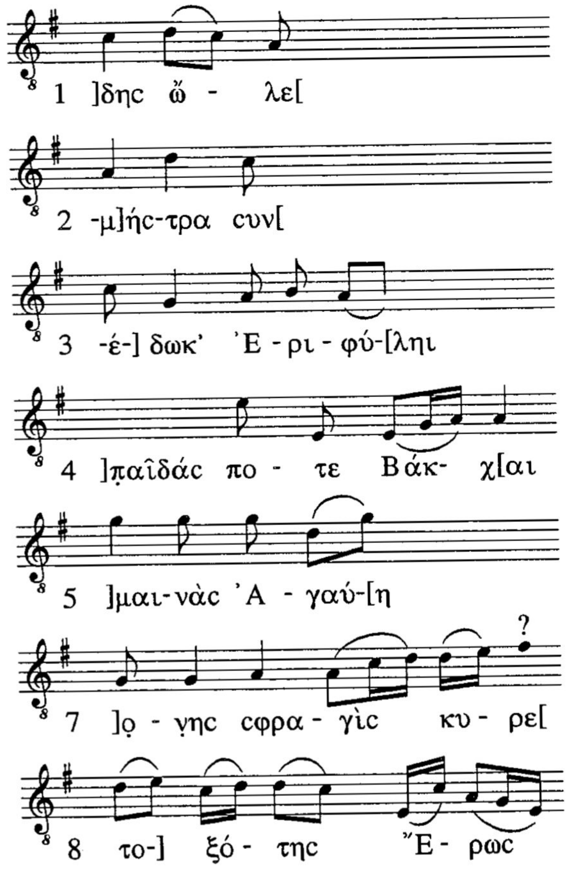
]Ʊ Ʊ͡ Ʊ |Ʊ̮[
5].(.)[]μαιναcαγαυ[

6]γ̣οιcαθρηcονομμαcιν [

]Φ Φ̄ C CƵ̮| |Z̮ :?[
7]ο̣ν̣ηccφραγειcκυρε[

]|Z̄ Ƶ̮| |Ƶ̮ ¬Ƶ̮ C̄Φ̄¬̮ ⁄[
8] . ξοτηcερωc [

9]ρ̣ωτικαcγραφαc [


1]δηc ὤ - λε[
2 -μ]ήc-τρα cυν[
3 -έ-] δωκ' Ἐ - ρι - φύ-[ληι
4]π̣αῖδάc πο - τε Βάκ- χ[αι
5]μαι-νὰc Ἀ - γαύ-[η
?
7]ο̣ - ν̣ηc cφρα - γὶc κυ - ρε[
8 το-] ξό - τηc Ἔ - ρωc

Notation 3 C̄[: or Ō[4 ΦC: ΦO is possible ?[: possibly Φ 5 Above the second and third Ʊ there is a bracket-like device 7 The apparent double point after Z may be the ends of a short vertical stroke.

Text 1 ὤλε[cε or ὤλε[το, preceded by a patronymic? 2 E.g. Κλυταιμ]ήcτρα cὺν [Αἰγίcθωι; or Ὑπερμ]ήcτρα, less likely Μ]ήcτρα 3 δῶκ' Ἐριφύ[ληι 4 παῖδάc ποτε Βάκχ[αι 5 μαινὰc Ἀγαύ[η 6 ἄθρηcον ὄμμαcιν 7 E.g. πημ]ονῆc, ἡδ]ονῆc, καλλ]ονῆc, μ]όνηc, Ἀντιγ]όνηc or]ον ἧc cφραγίc, then some part of κύρω or κυρέω 8 τ]ο̣ξότηc Ἔρωc 9 ἐ]ρωτικὰc γραφάc.

]?X̄ Φ C X Φ̄̇ X¬̮ X¬̮[
10]λ̣οcοποτεμουcω[

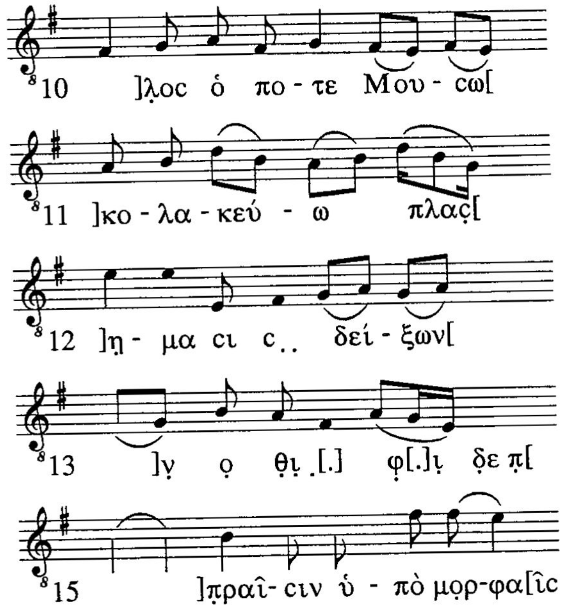
]C Ȯ |Ō̮ CO:|OṄΦ̄[
11]κολακευωπλαc̣[

]Z Z ¬ ẊΦ̄̇C̮ ΦC :O[
12]η̣μαcιc . . δειξων[

]Φ̮̄O C X ĊΦ̄¬̮?[
13]ν̣ο̣θι̣ .[.]φ̣[.]ι̣δ̣επ̣[

]? ? ? ? ? ? ? ?[
14] . . .[ ]ι̣τ̣ο̣ .α̣φρο̣δι̣τ̣[

]:O ? A A̮Z̄: ? [
15]π̣ραιcινυπομο̣ρφα[


10]λ̣οc ὁ πο - τε Μου - cω[
11]κο - λα - κεύ - ω πλαc̣[
12]η̣ - μα cι c̣ .. δεί - ξων[
13]ν̣ ο̣ θι̣ .[.] φ̣[.]ι̣ δ̣ε π̣[
15]π̣ραῖ- cιν ὑ - πὸ μο̣ρ-φα[ῖc

Notation 10 Above the bar over the second Φ is a small but distinct device resembling a square spiritus asper (⊦) and then a stigme 11 The bow of the Φ is abnormally low; the diseme bar (if that is what it is) comes where the bow would be expected 12 The two Zs uncertain O[could be A[13]Φ̄ uncertain 15 The first A uncertain, with unexplained marks above. The line above A Z kinks up at the end and resembles the triseme sign as formed on nos. 11, 23, 40, 42–3, 53; see discussion by Winnington-Ingram 2 (1965), 190 f.; Pöhlmann (1970),138.

Text 10 ὁπότε (or ὅ ποτε), then μου or ἐμοῦ or ἐμοὺc or Μουcῶ[ν (μουcω[ιδ-, etc.) 11 οὔ cε] κολακεύω πλαc[τοῖc λόγοιc or the like? 12] ἡμᾶc or ἥμαcι, -ήμαcι, then possibly cε δείξω or -ων (or δ' εἴξω, etc.) 15 E.g. λαμ]πραῖcιν, λυ]γραῖcιν, ὑ]γραῖcιν (or -αῖc ἴν'), and ὑπὸ μορφα[ῖc.

First published by M. L. West;[1] see there for photograph and more detailed notes on the text. Two lines (6 and 9) are accompanied by no musical notation. They are written with normal spacing from the preceding lines, while the other lines are widely spaced to accommodate the notation. The notation was evidently written in after the text and by a different, more flamboyant hand; its owner appears to have been well accustomed to the notation and to have known what he was doing.

We cannot tell whether the fifteen lines are all from the same composition. There are references to mythical *femmes fatales* in 2–5, to Eros in 8, and to Aphrodite in 14; there is an imperative in 6, and an apparent first-person verb in 11, suggesting a dramatic scena. The metre is heterogeneous: there are dactylic phrases (3–5), iambic ones (6, 7[?], 8–9), and some lines with sequences of three or four shorts (10, 15).

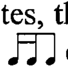
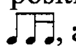
The notation-key is Hyperionian. The compass is from *e* to *g′*, though the two highest notes are least used. The most frequent note is C = *a*; it also has the feel of a tonal centre. Next in frequency is Φ, the note a tone down.

Line 9, where is no notation, may mark a division between two sections of the music. There are fewer high notes in the second section and more low ones. Semitone progressions occur only in the second section; in the first (and in the second too to some extent) they are repeatedly avoided by jumping a note in the scale, giving the interval of a minor third.

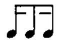
Downward octave leaps appear in two places, and there are several other leaps of a fourth, fifth, or sixth. A feature pointing to a relatively late date of composition is the division of certain short syllables between two notes (in 8 τοξότηc Ἔρωc, and perhaps in 7 κυρε[) and of certain long syllables between three notes (4 Βακχ[, 8 Ἔρωc, 11 πλαc[). In the last instance, if the word was some part of πλαcτόc, this treatment may have been expressive. The cases of Βακχ[and Ἔρωc may be related to the phenomenon observable in certain other musical papyri (nos. 17, 39, 53) that mythological names are on occasion subject to especially elaborate melismatic treatment.[2]

Another late feature may be the tendency to flout the rules relating melodic line to word accent. So far as we can judge, the accent is respected more often than not. But the upward leap on -μ]ήcτρα (2) goes clean against the accent; in 10, if ὁπότε is the right articulation, the accented syllable is set on a lower note than the two others; and in 5 μαινὰc Ἀγαύ[η, while there is no conflict between the melody and the accents, the phrase breaches the principle that after an oxytone word (where there is no grammatical pause) the melody does not fall again until after the next accent.

The stigme occurs in places, but is not used consistently to mark the arsis, being absent in some places where a sequence of four or five syllables and the accompanying notation are well preserved. Where it does appear, our ignorance of the rhythm precludes understanding. In general the diseme appears not to be used for single notes corresponding to a long syllable. It (and the triseme, if rightly seen in 15) may be seen on some but not all melisms (8, 11, 12, 13, 15; so perhaps in 3). It seems also to occur with notes above certain short syllables (10, 15).

The hyphen, which takes the form of a long, straight, rising dash below the note-signs, is used with most but not all of the melisms. Where the melism contains three notes, the position of the hyphen below two of them ought to indicate whether the rhythmic value is  or , and in the case of (Ἔ)ρωc it does point to the latter. In the other instances (4, 13), however, it seems to link all three notes.

The double point occurs in 7, 11, 12, and twice in 15. In 11 it appears before the third and most elaborate of three successive melisms, and in at least three of the other four instances it is preceded by a melism, though we cannot be sure that another followed. At the beginning of 15 what precedes it is lost, but only one note is visible after it, where the long (circumflexed?) syllable would certainly support a melism.

The leimma occurs only in 11, where it serves to indicate the prolongation of the second note in a three-note melism, i.e. 

The meaning of the bracket-like sign linking two of the inverted omegas in 5 is obscure.

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[1] West (1998), 89–93.

[2] West 2 (1992), 203; above, pp. 59, 130; below, p. 178.

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1] ̣[

] I K̇ A O? [
2]λεπωπατραc[

]– – =̇ E – Δ ?̇ [
3]c̣μορονπαραν̣οµ̣[

]O Ƶ̄C̄ Φ̄C̄ Φ̄[
4]ο̣υδωτηcεπ ̣[

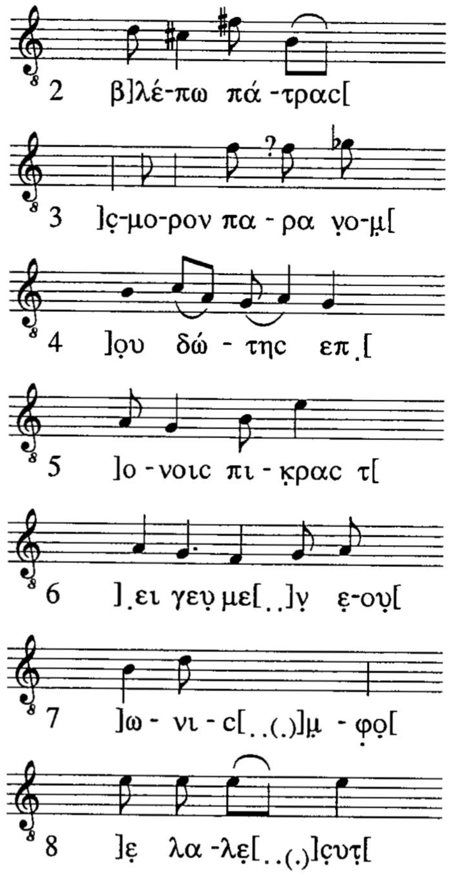
]? C Φ̄̇ O Z̄ [
5]ονοιcπικ̣ραc τ[

] Ċ Φ̄ R̄ Φ̇ C [
6] ̣ειγευ̣με[̣(̣)]ν̣ε̣ου̣[

]Ō I[ ] ?̄[
7]ωνιc[̣ ̣(̣)]µ̣φο̣[

] Z Ż Z̿̇[ ]? Z̿̇ ?[
8]ε̣ λαλε̣[̣ ̣(̣)]c̣υτ̣[

]?[


?
2 β]λέ-πω πά -τραc[
3]c̣-μο-ρον πα - ρα ν̣ο-µ̣[
4]ο̣υ δώ - τηc επ ̣[
5]ο - νοιc πι - κ̣ραc τ[
6] ̣ει γευ̣ με[̣ ̣]ν̣ ε̣-ου̣[
7]ω - νι - c[̣ ̣(̣)]µ̣ - φο̣[
8]ε̣ λα -λε̣[̣ ̣(̣)]c̣υτ̣[

Notation 3 The significance of the horizontal bars is obscure, but they are placed like note-symbols and similarly furnished, where appropriate, with diseme and stigme. Similar bars appear in nos. 4 (see p. 20), 44 fr. 1 → 4. One might imagine the bar being an abbreviation for 'same note as previous', but if so, one wonders why it is not used more often, as repeated note-sequences are frequent in the musical texts 4]O: E is also possible. Ƶ is uncertain. There is too much damage for any stigmai to be visible 7 Ō very faint and uncertain 8 The apparent stigme over the second Z is not certainly ink]?: the tail of another Z?

Text 2 β]λέπω (or a compound) seems likelier than]λε πω. The melodic fall on πατραc[favours πάτραc as against πατράc[ι 3 δύ]cμορον παρὰ νόμ[ον, παρανόμ[ωc? 4]ο̣: θ possible; e.g. με]θυδώτηc,]ουδω τῆc,]ου δώτηc 5]ον οἷc, μ]όνοιc, (-)γ]όνοιc, π]όνοιc, etc., then πικρὰ, -ὰc, -ᾶc 6 εἴ γ' εὖ, ἐπ]είγευ? 7 E.g. λειμ]ωνίc[ι cυ]μφο̣[ιτ-, ῾Ελικ]ωνίc[ι cὺ]μ Φο̣[ίβωι.

First published by M. L. West;[1] see there for photograph and more detailed notes on the text. Lines 3 ff. are separated from 1–2 by a gap and written with a different pen; they presumably represent a different text. This is confirmed by the notation: that in line 2 belongs to the Ionian or Hypoionian key, but that in 3–8 to the Hypolydian. This seems to have been another manuscript containing musical excerpts.

The notes preserved from the second excerpt fall within the octave *f* - *f′*; the other went at least a semitone higher. Intervals included a falling fifth at or near the end of the first excerpt, and a rising fourth and a falling seventh in the second. There seems to have been a melism on the last preserved syllable of the first excerpt. In the second we see no melisms, but two clear cases of notes marked as triseme (4, 6). The rhythm is obscure, and the stigmai do not help to elucidate it.

The melodic line is in harmony with the accents of the three or four recognizable words.

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[1] West (1998), 93–5.

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Col. i

]
1]

]
2]

]
3]

]M Ͱ Ͱ
4]π̣ηλυποι

] ?
5]φ̣α̣..

]⁄ ⁄
6]....χνουc

Col. ii

][]? ? ? Ι [] [
1 .]ν̣ωτ̣ε̣ρ[ ]υcαχ̣η̣.[

Ι Ι̅Ƶ̅ ΟC̄⁄Ƶ Z Z̄[
2 εγ̣..τ̣αcαεκουcα[

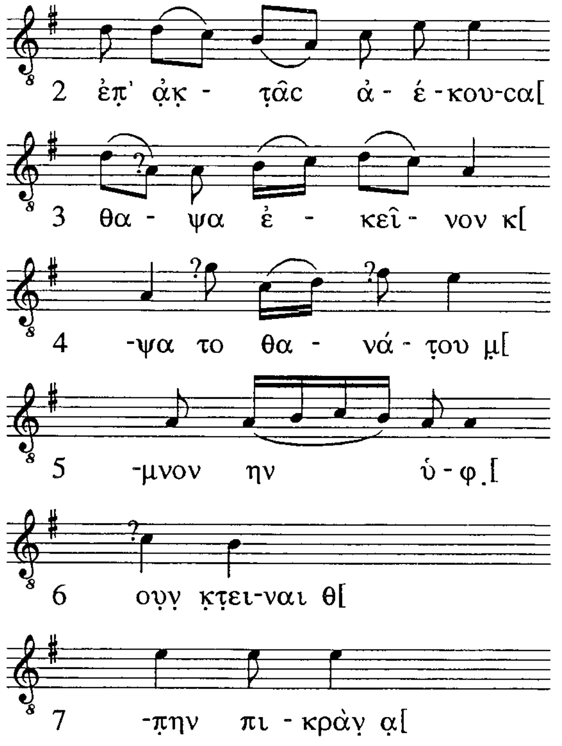
Ι ?CΟƵ:ΙƵ C̄ ?[
3 θαψαεκεινονκ[

C̄⁄?ƵΙ ? Z [
4 ψατοθανατ̣ουμ̣[

C CΟ:ƵΟ C C[
5 μ ν ο ν η ν υ φ.[

?⁄ Ο̄⁄ [
6 ου̣ν̣κ̣τ̣ειναιθ[

Z Z Z̄⁄[
7 π̣ηνπικραν̣α̣[


2 ἐπ̣' ἀ̣κ̣ - τ̣ᾶc ἀ - έ -κου-cα[
3 θα - ψα ἐ - κεῖ - νον κ[
4 -ψα το θα - νά - τ̣ου μ̣[
5 -μνον ην ὑ - φ.[
6 ου̣ν̣ κ̣τ̣ει-ναι θ[
7 -π̣ην πι - κρὰν̣ α̣[
?
?
?
?

Notation i 4 On the second and third signs see above, p. 154 5 An apparent Z with, sitting on top, a sinuous upright (as tall as ξ, but differently formed), through which runs a long rising diagonal 6 Two long rising diagonals.

ii 1 Above []υ perhaps the top left of A with triseme over it; or all part of Ʊ? 3 Between Ι and C two marks, possibly interpretable as C: On the edge what looks like the start of a diagonal rising from over κ[4 A diagonal from over the first τ, and under it an obscure sign, possibly Ʊ ?: possibly A or Z̄ 5 The C's in this line all seem to have a small hook at the top 6 Above υ̣ν̣ the tips of a tall sign, perhaps Ƶ.

Text i 4 ἔ]πηλύ ποι (ποῖ, ποι-), or]πη λυποῖ? 6 The last word perhaps ἴχνουc or χνοῦc.

ii 1 ἀ]νωτέρ[ο]υc? ἄ]νω φ̣έρ[ο]υcα not suggested 2 ἐπ̣' ἀ̣κ̣τ̣ᾶc may be a possible reading. Then ἀέκουcα [... ἔ]θαψα ἐκεῖνον 4–6 If the slanting mark above the note C at the beginning of 4 is a diseme, -ψᾶτο (or -ψα̅ τὸ) is implied. Then perhaps θανάτου μ[οῖραν...πολύϋ]μνον, ἣν ὑφ-... οὖν κτεῖναι (κτείναι, κτείναιθ') 7 λύ]πην πικρὰν?

First published by M. L. West;[1] see there for photograph and more detailed notes on the text The lines in the two columns are not in alignment, and the fact that the musical notation in col. i is alien to the key employed in col. ii suggests that different compositions may be represented

In ii 2–3 it seems that a woman relates how, with reluctance, she buried a certain male, perhaps on a (rugged) shore, in which case he had presumably been cast up drowned. This may be a mythological situation based on Euripides' *Hecuba*: Hecuba speaking of her son Polydorus, treacherously murdered by Polymestor and cast up ἐπ' ἀκταῖc.

The notation in col. ii is Hyperionian, but the M at i 4 indicates a different key there, probably Lydian; the theoretical alternatives, Dorian, Hypodorian, Phrygian, and Hyperphrygian, are nowhere attested among the post-Hellenistic documents, whereas Lydian is common.

The preserved notes in the Hyperionian part lie between the limits *a* and *f#′*. (The singer is therefore a man, although the song is or includes a woman's lament.) The lowest of these notes, C = *a*, appears to be the tonic. Several times (ii 3, 4, 5, cf. 2) we see the melody rising from this note in two or three steps and then descending again to it. The note a fifth above, Z = *e′*, provides a secondary focus.

Melisms are of the more advanced type, with short syllables divided between notes in ii 3 and 4, and the final vowel of ἔ]θαψα given its own note instead of being elided. ἦν/ἣν in 5 is apparently set to four notes, an exceptional extravagance; the four signs are divided two and two by a double point. The double point is used normally in 3, but omitted with other melisms. Two of these have the diseme instead (2), but this again is not used consistently.

Melody and accent show some correspondence, but if ἐπ' ἀκτᾶc is read in ii 2 there is at least one discrepancy. The reading of the second note in ii 4 as Ʊ also looks suspect from this point of view.

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[1] West (1998), 95–7.

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Φ Ç OΞ̇O Ȯ :ΦC̄[ ] IΞ [
1 ΠΑΙ ΑΝ Ω̣ ΠΑΙ Α Ν̣[. . .]Ι̣[ ]Ρ̣Ω Ν[

Ċ :ĪZ̄ Ż Ʊ̇ [:] Ạ̄Ʊ̄Ā Ȧ[
2 ΤΟΝ ΔΑ ΛΟΥ ΤΕΡ ΠΕΙ ΤΑϹ [

? ? Ż :Ʊ̄Θ̄Ʊ̄ Ʊ̇A Ȧ [
3 ΛΩ̣ Ν̣ ΚΑΙ ΔΕΙ ΝΑΙ ΞΑΝ ΘΟΥ[

:ĀƱ̄ ∩̇Z Ʊ̇ :Ʊ̄ĀĪ İ IΞ̇ [
4 Λ̣Ω Ν ΠΑ ΓΑΙ ΤΙϹΜΗ ΝΟ[

[ ] C̄∩̇ Ξ̇ :ĪZ̄ İ Ξ̇C [
5 Ε̣Υ̣[ ]ΤΑ ΠΑΙ Α Ν ΟϹΜΟΥ ϹΑ[

Ż C̄∩̇ :ZȦ ĪŌ Ż Zİ [
6 ΚΡΑ ΝΑ Ϲ Υ ΜΝΩ Ν Ε ΞΑΡ [

Ȯ Ç̇ :ŌC̄ ∩̇Φ Ż :ĀƱ̄Z̄ [
7 ΞΑϹ ΦΩ ΝΑ Ν ΟϹ ΠΥΡ Β[

A Zİ İ Ξ̄∩̇Φ Ξ̇ :ĪZ̄[̄?̄
8 ΧΑΙ ΤΑΙ Ϲ ϹΤΕ ΨΑ Ϲ ΛΑ ΤΟΥ [

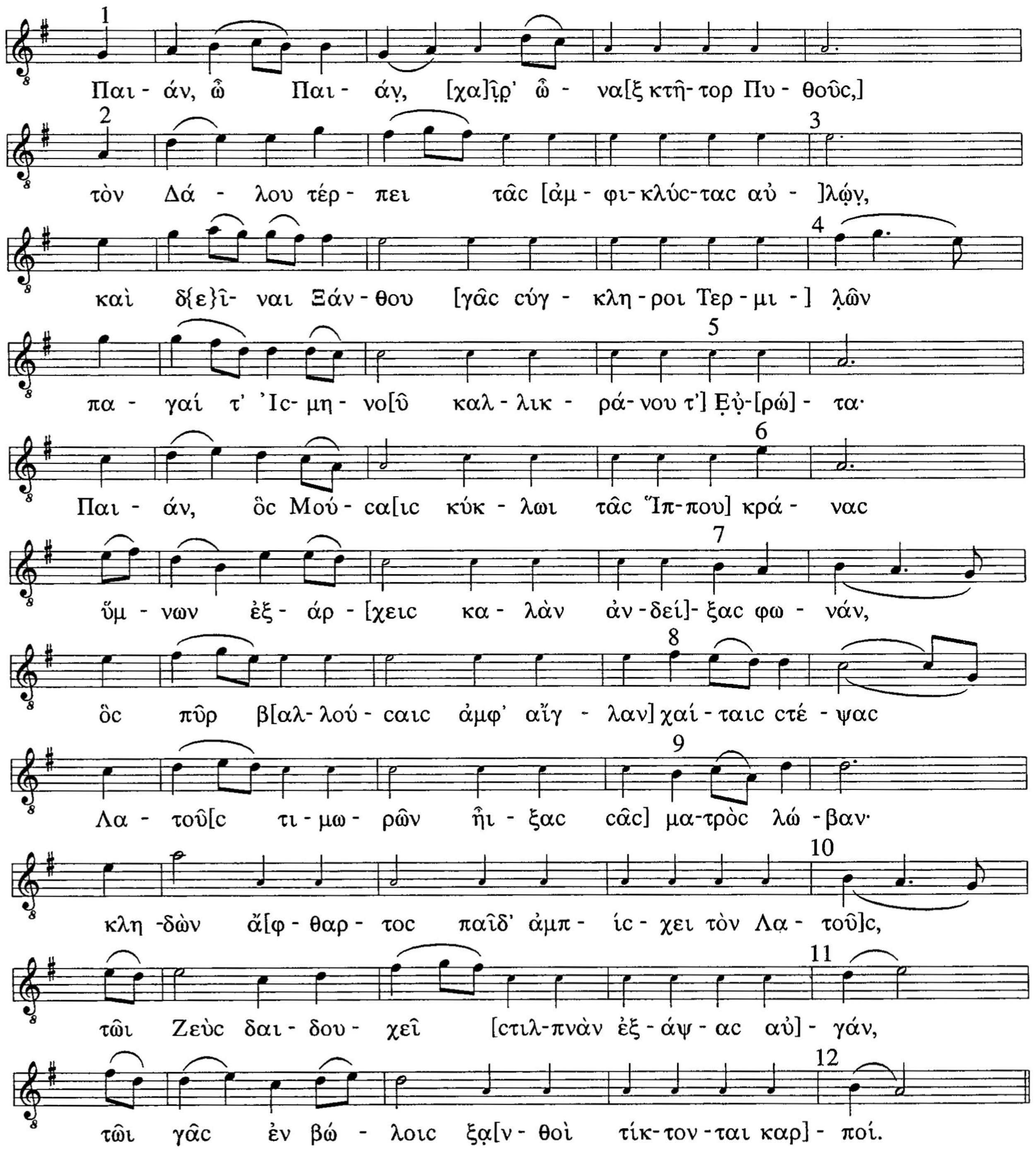
O Ξ̇C İ Ī∩̇ Ż Θ̄ [
9 ΜΑ ΤΡΟϹ ΛΩ ΒΑ Ν ΚΛΗ ΔΩ ΝΑ[

ŌC̄ ∩̇Φ Zİ Z̄ Ξ̇ İ :ĀƱ̄[̄?̄
10 Ϲ ΤΩ ΖΕΥ Ϲ ΔΑ ΔΟΥ ΧΕΙ [

:ĪZ̄∩̇ Aİ :ĪZ̄ Ξ̇ :İZ Ī [
11 ΓΑ Ν ΤΩ ΓΑ Ϲ ΕΝ ΒΩ ΛΟΙϹ ΞΑ̣[

ŌC̄ ∩̇
12 ΠΟΙ

Notation 2 [:] suppl. Pöhlmann (1970), 94 3 ? ? West, ? ∩̇ Pöhlmann (1970), 94 4 :A Wagner (1921) 258, Β̣ A Schubart (1918), 766 :Ʊ Pöhlmann (1970), 94, ? Ʊ Schubart (1918), 767 6 first Ż Wagner (1921), 259, Z Schubart (1918), 767 7 Ç̇ Wagner (1921), 259, Θ̣ Schubart (1918), 766 8 :I Mountford (1929), 153, ? I Schubart (1918), 766 11 first : ĪZ̄ Wagner (1921), 260, · ĪZ̄ Schubart (1918), 767 second : ĪZ̄ Pöhlmann (1970), 94, ĪZ̄ Schubart (1918), 767.


1
Παι - άν, ὦ Παι - άν, [χα]ῖρ' ὦ - να[ξ κτῆ-τορ Πυ - θοῦϲ,]
2
τὸν Δά - λου τέρ - πει
3
τᾶϲ [ἀμ - φι-κλύϲ-ταϲ αὐ -]λ̣ῷν,
καὶ δ{ε}ῖ- ναι Ξάν - θου [γᾶϲ ϲύγ - κλη - ροι Τερ - μι -]
4
λ̣ῶν
πα - γαί τ' Ἰϲ- μη - νο[ῦ καλ - λικ -
5
ρά- νου τ'] Ε̣ὐ̣-[ρώ] - τα·
Παι - άν, ὃϲ Μου - ϲα[ιϲ κύκ - λωι
6
τᾶϲ Ἵπ-που] κρά - νας
ὕμ - νων ἐξ - άρ - [χειϲ κα - λὰν
7
ἀν-δεί]- ξαϲ φω - νάν,
ὃϲ πῦρ β[αλ- λού - ϲαιϲ ἀμφ' αἴγ -
8
λαν] χαί - ταιϲ ϲτέ - ψαϲ
Λα - τοῦ[ϲ τι - μω - ρῶν ἧι - ξαϲ
9
ϲᾶϲ] μα-τρὸϲ λώ -βαν·
κλη -δὼν ἄ[φ - θαρ - τοϲ παῖδ' ἀμπ - ίϲ - χει τὸν Λα -
10
τοῦ]ϲ,
τῶι Ζεὺϲ δαι - δου - χεῖ [ϲτιλ-πνὰν ἐξ - άψ - αϲ
11
αὐ] - γάν,
τῶι γᾶϲ ἐν βώ - λοιϲ ξα̣[ν - θοὶ τίκ-τον -ται καρ] -
12
ποί.

Text 1–12 supplements e.g. West: 2 αὐ]λῶν Reinach (1919), 13 7 β[άλλειϲ αἴγλην Wagner (1921), 265 10 [ϲτιλπνὰν ἀλλάξαϲ αὐ]γάν Burkert 11 ξ[ανθοὶ τέλλονται καρ]ποί Reinach (1919), 13.

1 παι(άν) in ἔκθεϲιϲ, paragraphos above π(αι) 4 λ̣ω West, δ̣ω Schubart (1918), 767 5 ε̣υ̣[ ] West, κ̣ρ̣ or κ̣υ̣ or κ̣ι̣ Schubart (1918), 766 11 ξα̣[West, ξ[Schubart (1918), 767.

This stately Paean is preserved as the first of the musical items collected in Pap. Berlin 6870.[1] In 1992 it was augmented by the attachment of a small additional fragment at the upper right-hand corner,[2] contributing seven extra letters or letter traces to the poetic text and three associated musical notes. As in the two instrumental excerpts (nos. 51–2), the music is wholly diatonic. This points, together with the melismatic style characteristic of the Imperial period and the elaborate rhythmical notation, to a date of composition not much earlier than the manuscript. A second-century date is most likely. The poet of the Paean is unknown. There is no reason to connect it with the archaic Paean of Tynnichos of Chalcis, as A. Bélis has proposed.[3] There is only one fragment of Tynnichos (εὕρημά τι Μοιcᾶν: *PMG* 707), which is incompatible with no. 50 because of its metre and dialect.

The upper and left-hand margins of the papyrus are preserved. The longest lines have a width of 16. 5 cm. (lines 2–10) to 19 cm. (lines 1, 11). The right half of the text is lost. The amount missing[4] can be estimated only roughly on the basis of the metrical reconstruction (see below). The first line of the Paean is marked as the beginning by a paragraphos and ἔκθεcιc; the final word ran over from line 11 to line 12, the rest of the latter line being left blank. The text is written without division of verses, which often end in mid line, but with spaces between most syllables to accommodate notes and groups of notes.[5]

The melody is in accord with the word accents with few exceptions.[6] The notation-key is Hyperionic. The notes occurring are Φ C O Ƶ I Z A Ʊ Θ (*g a b c′ d′ e′ f#′ g′ a′*). The text consists entirely of long syllables. However, as the careful rhythmical notation shows, there is contrast between shorter and longer time-values, some of the syllables being prolonged to double or even triple length. The arsis-points enable us to analyse the bar structure satisfactorily, and it is apparent, as H. Abert recognized, that the macron (–) above certain notes and note groups here signifies not diseme but tetraseme value: as the syllables are all long, the unmarked notes are already disemes.[7] Groups of two or more notes are bracketed together by means of the dicolon preceding the group and/or the hyphen beneath it. The leimma is confined to the catalectic verse-ends, where it must be interpreted (with Th. Reinach) as a lengthening of the preceding note, since in lines 4, 7, 8, and 10 a further note follows it, and in lines 6, 9, 11 the leimma is written before the final consonant of a closed syllable (6: κράνα∩c, 9: λῶβα∩ν, 11: αὐ]γά∩ν). R. Wagner argued that in the cases of lines 4, 7, 8, 10 the leimma lengthened the *following* note, a view which soon encountered objections from J. F. Mountford.[8]

The composition consisted of eleven catalectic periods. As nine periods (lines 4–12) end with a leimma, we may suppose a leimma at the lost end of line 1 and the damaged beginning of line 3 too. By the addition of the leimma the last syllable of every period becomes hexaseme. Wagner, by arranging the lines around the catalectic verse-ends with leimma, had already found the rhythmical pattern of no. 50, which recurs clearly in no. 51, an instrumental piece: every period of no. 50 consists of twelve long syllables, which have the following rhythmical values: ∸⊔∸∸⊔|∸∸--∸∸⊔ ∩̇.[1] By using only long syllables the poet gave the paean a slow tempo appropriate to ritual solemnity.[2] The initial line shows a syncopation-variant on the standard scheme, the third and fifth syllables being tetraseme instead of the second and fifth, with the consequence that ὦ is divided between thesis and arsis.[3] After the fifth syllable of every period there is regular caesura. Rhythmical variety is achieved by dividing some syllables between two notes (many of the tetrasemes between three notes), and by splitting the hexaseme syllables at the end of the period in different ways (lines 5, 6, 9: 𝅗𝅥. , lines 11, 12: ♩𝅗𝅥, lines 4, 7, 10: ♩♩. ♪, line 8: ♪♩♫).

Periods composed entirely of long syllables, implying a slow and solemn tempo, are found in hieratic poetry from the Archaic period on. Aristides Quintilianus recognizes several different metres composed of long syllables, among them the cπονδεῖοc μείζων (⊔ ⊔̇) and the παίων ἐπίβατοc (- ∸ - - ∸).[4] The first of these might, one would suppose, be capable of realization as a 'greater dactyl' or (⊔ ∸ ∸) or a 'greater anapaest' (∸ ∸ ⊔). Wagner applied such a dactylic analysis to the Paean, dividing each period into four bars with a preliminary upbeat, and combining the hexaseme catalexis with the following upbeat to make an octaseme bar (𝅗𝅥. ♩).[5] The period then appears as the half-speed equivalent of u̇ | - u̇ u̇ | - u̇ u̇ | u u u̇ u̇ | ⊔ . From a metrical point of view, however, this is unparalleled: lyric dactyls may have an anacrusis and catalexis, but never resolution of the princeps.[6]

M. L. West's anapaestic analysis, ∩̇ ∸⊔ | ∸ ∸⊔ | ∸ ∸ - - | ∸ ∸ ⊔ ||, is recommended by the pattern of the words, the regular caesura after the second anapaest (i.e. the first anapaestic metron), and the fact that the omission of the initial 'short' has parallels in ionic and anapaestic lyric from Classical and Imperial times.[7] On the other hand it involves dividing the hexaseme catalectic syllable of every period between measures. It seems that the text was composed in 'greater anapaests', but the musical setting used a rhythmical pattern (ῥυθμοποιία) that is more conveniently represented by Wagner's dactylic bars, which our transcription tentatively adopts.

Attempts at supplementing the lacunae can at least start from a calculation of the number of syllables to be restored, but are subject to no control in respect of the number of letters, because the spacing required for the notation, as we can see from the preserved portion, varied unpredictably. Many of the older proposals for supplements are ruled out as having too many or too few syllables.[8] In line 1 G. B. Pighi took the projecting Παιάν, ὦ Παιάν as an isolated epiphonema and assumed the loss of a whole line after it.[9] But this would far exceed the presumptive width of the column. The supplements we have printed are of course merely *exempli gratia*, to convey an idea of the Paean's singular rhythmical form. Regardless of supplements the structure of the Paean is obvious: periods 1–4, 5–8 and 9–11 are set off as stanzas. Perhaps a twelfth period is lost, which should have ended with an undivided hexaseme like periods 4 and 8.

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[1] For the history of the discovery of this papyrus, its state of preservation, dating, and contents see above on nos. 17–18, p. 58.

[2] See above, p. 58.

[3] Bélis (1998), 80 n. 15. For Tynnichos see Käppel (1992), Pai. 4.

[4] On column-widths in musical texts see Johnson 1 (2000), 66–8.

[5] Division of syllables is found also in nos. 8, 17–18, 42–3, 46, 55.

[6] The exceptions are: 1 the second Παιάν, 5 ὅc, 11 γᾶc.

[7] Abert (1919), 317.

[8] Reinach (1919), 18; Wagner (1921), 274–6; Mountford (1929), 159 n. 5.

[1] Wagner (1921), pl. I a.

[2] Cf. West 2 (1992), 155–6.

[3] Cf. Wagner (1921), 279.

[4] West (1982), 55 f.; 2 (1992), 155 f.; Aristides Quintilianus 1. 15 (35. 12 f. W.-I.), 1. 16 (37. 7–12 W.-I.).

[5] Wagner (1921), 278 f., pl. I a.

[6] Snell (1962), 25 f.

[7] West (1982), 125 (Euripides), 139 (Timotheos), 171 (no. 59), 172; 2 (1992), 155 f., 317 f.

[8] For discussion of supplements see Pighi (1943), 174–202; Heitsch (1961), 169 f.; West 1 (1992), 14.

[9] Pighi (1943), 197 f.

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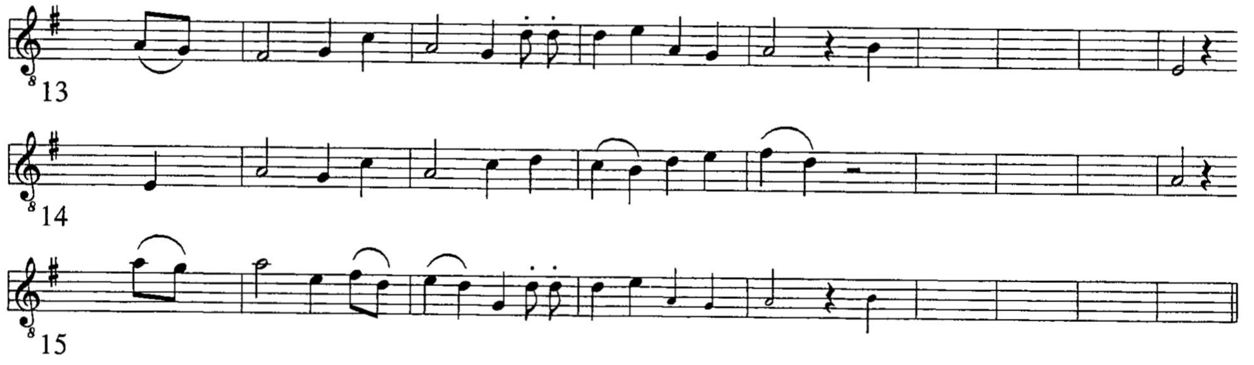
13 C͜Ḟ Ч̄ Ḟ ⩡̇ C̄ Ḟ <̇Ɉ< : < ⊏ Ċ Ḟ C̄ ∩̇ Ḳ ? [+10]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

14 Γ̄ ∩̇ ⟦C͜Ḟ Ч̄⟧ Γ̇⟦Γ⟧ C̄ Ḟ ⩡̇ C̄ ⩡̇ <̇ ⩡̄͜K <̇ ⊏̇ \̄͜<̄ ∩̣̄ [+14]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

15 ⟦C̄ ∩̇⟧ ꟽ͜Ż ꟽ̄⊏ \͜<̇ ⊏̄͜<̄ Ḟ <̇ Ɉ < : < ⊏̣[? ? ? ∩̇] [+14]
1 2 3 4 5 6 7 8 9 10 11 12 13

Notation **13**, 3 Ч̄ coni. Pöhlmann (1970), 98, Ч̇̄ Pap. 4 Ḟ Schubart (1918), 768, F Wagner (1921), pl. B 5 ⩡̇ West 1 (1992), 13, ⩡ Schubart (1918), 768 8/9 Ɉ Wagner (1921), 260, Ɉ̇ Schubart (1918), 768 16 Ḳ ? Pöhlmann (1970), 98, Ḳ Wagner (1918), 260 **14**, 2–3 ⟦Ċ͜F Ч̄⟧ Pighi (1943), 203 3–4 Γ̇⟦Γ⟧C̄ (a suprascript above the cancelled signs 2–3) Pöhlmann, Γ̇+C̄ Schubart (1918), 768, West 1 (1992), 14 10/11 K added above ⩡̄, which means ⩡͜K Pöhlmann (1970), 99 16 ∩̣̄ West 1 (1992), 13, ∩̣ Pighi (1943), 203 **15**, 7/8 ⊏̄͜< Pöhlmann (1970), 98, ⊏<̄ Schubart (1918), 768.



This instrumental fragment is indented in relation to the Paean by the equivalent of two syllables. Like the Paean, it is notated in Hyperionic. The preserved note-symbols are Γ Ч F C K ⩡ < ⊏ \ Z ꟽ (*e f# g a b c′ d′ e′ f#′ g′ a′*). As R. Wagner recognized, the rhythm is also the same as in the Paean.[1] Here too we find catalectic note-groups with a leimma, which enables us to delimit the periods. But as the instrumental notation unaccompanied by text occupies much less space, complete periods are preserved. The scheme that emerges is ∸⊔∸∸⊔∸∸––∸∸⊔ ∩̇, which corresponds exactly to that deduced for the Paean. There are no note-signs following the leimma as in no. 50.[1] Therefore the leimma in no. 51 must be a real pause, not a lengthening of the preceding note.

---

[1] Wagner (1921), 277 f.; West 2 (1992), 319.

In line 13 a leimma concludes the first period; the second, mostly lost, ends at the beginning of line 14, and traces of the catalectic group that closes the third are identifiable later in the same line. At the start of line 15 stand the deleted signs C̄ ∩̇, which G. B. Pighi was no doubt right to interpret as the end of the fourth period, repeated in error.[2] The fifth period lacks four symbols at the end. Of a possible sixth period nothing remains. The lines of notation, their length calculated according to the above scheme, did not extend so far to the right as in the Paean.

Only the pointing of notes 3–5 of the first line contradict the scheme, perhaps in consequence of a scribal error. In line 14, where a group of notes is cancelled, Pighi recognized a dittography.[3] Above the tenth note ⩡̄ a K has been added; the group is to be interpreted as ⩡̄͜K, analogous to the hyphenated groups at lines 14. 14–15 and 15. 7–8.

It remains to explain the symbol Ɉ, which always stands between two identical notes and which appears also in the second instrumental fragment (no. 51, 13. 8–9 and 15. 10–11; no. 52, 21. 8–9). H. Abert and Pighi thought it might be the note Ч.[4] But apart from the fact that the rhythm in those passages will not accommodate an additional note, in the third instance (line 21) the note Ч is melodically inappropriate. The symbol must therefore have articulatory significance, with no time value of its own. Th. Reinach and Wagner are no doubt right to take it as a form of staccato-sign, referring to F. Bellermann's Anonymus, §§ 2, 9–10, and 91–2.[5] The treatise distinguishes κομπιϲμόϲ, for which it gives the symbol +, and μελιϲμόϲ, for which it gives ƒ.[6] The meanings of the terms can be inferred from the writer's explanation by means of solmization syllables. He renders F + F by τωντω, F ƒ F by τωννω, while in § 86 the legato group F͜C is expressed as τωα. We may accordingly interpret κομπιϲμόϲ as staccato and μελιϲμόϲ as half-staccato.[7] In the Anonymus' examples the symbols are placed between pairs of identical notes, and this agrees with the use of the Ɉ in the papyrus. The left-facing symbol itself does not coincide with any of the shapes given by the manuscripts of the treatise, so that there remains some uncertainty as to whether staccato or half-staccato is intended. But there can be no doubt that the symbol represents a link between notes, alternative to the hyphen, and not a further note.

Abert wanted to find another Ɉ in the cancelled note-group in line 14, but Wagner saw that this was wrong.[8] Finally, there is a + between the notes written above 14. 3–4. It cannot well be a note, as there is no hyphen. Nor is the Anonymus' κομπιϲμόϲ appropriate, as it stands between unlike notes. It may be a deleted note.[9]

In key and metre the fragment appears closely related to the Paean. It cannot, however, be intended as an accompaniment to it, since it had at most six periods as against the Paean's eleven. As in no. 50, the transcription adopts Wagner's dactylic bars.

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[1] See above p. 169.

[2] Pighi (1943), 203.

[3] Pighi, ibid.

[4] Abert (1919), 321; Pighi (1943), 204, 219 f.

[5] Reinach (1919), 26; Wagner (1921), 269.

[6] Variously formed in the manuscripts; see the apparatus of D. Najock's edition ad locc.

[7] On Greek solmization cf. Westphal (1867), 477–80 (incorrect symbols on account of inadequate knowledge of the manuscript tradition); West 2 (1992), 265.

[8] Abert (1919), 321; Wagner (1921), 269.

[9] Abert (1919), 322; Wagner (1921), 269.

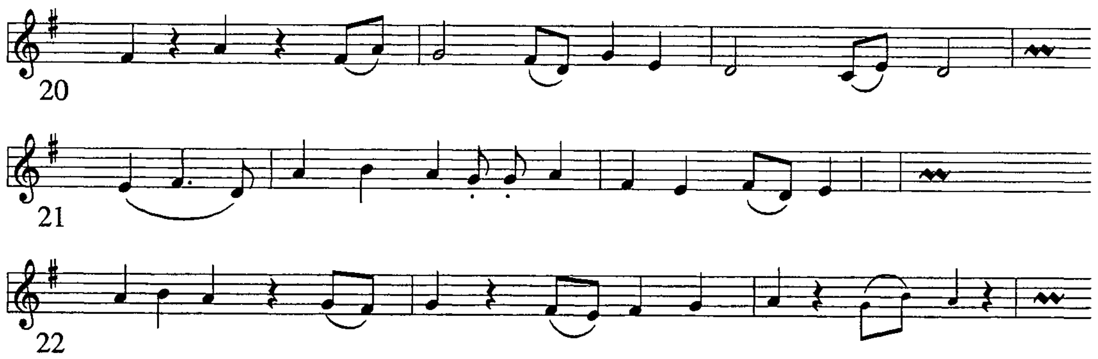
No. 52 PAP. BERLIN 6870 (20–2) Second–third century AD

20 \ ∩̇ Ϻ ∩̇ \‿Ϻ̇ Z̄ \̣‿˙< Z ⊏̇ <̄ ⊻‿˙⊏ <̄ ? [
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

21 : ⊏̄ \̄ ∩‿˙< Ϻ : K̇′ Ϻ Z ⸆ Ż Ϻ̇ \ ⊏ \‿˙< ⊏̣ [
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

22 Ϻ K̇′ Ϻ ∩̇ Z‿˙\ Z ∩ \‿˙⊏ \ Ż Ϻ ∩ [
1 2 3 4 5 6 7 8 9 10 11 12 13 14

Notation **20**, 8 \̣ or ⟦\⟧ or ∩̣ West 1 (1992), 14, ⟦\⟧ Schubart (1918), 766, 768   16 ? West 1 (1992), 13   **21**, 15 ⊏̣ West 1 (1992), 13, ⊏̇ Pöhlmann (1970), 104.



This second instrumental piece is indented like the first, and again notated in Hyperionic. The preserved notes are ⊻ < ⊏ \ Z Ϻ K (*c′ d′ e′ f#′ g′ a′ b′*). The rhythmical symbols of nos. 50 and 51 reappear, as does the staccato-sign ⸆ of no. 51, here between two notes Z. There are no problems of reading, as this portion of the papyrus is well preserved. But the rhythmical interpretation of the fragment presents difficulties.

R. Wagner offered a transcription which, as J. F. Mountford noted, failed to take due account of the hyphens and arsis-pointing.[1] H. Abert's and G. B. Pighi's transcriptions suffer from misinterpretation of the colon and the staccato-sign.[2] Mountford postulated negligence on the part of the scribe as he approached the end of his task; but the exact correspondence of rhythm and pointing in lines 20 and 22 makes the assumption of error unlikely. The basic scheme in these lines appears as -∸-∸∸⊔∸--∸⊔∸⊔. The group - ∩ can take the place of either -- or ⊔, implying that the leimma here represents an actual pause, not a lengthening of the preceding note.

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[1] Wagner (1921); Mountford (1925), 176 n. 1.

[2] Abert (1919), 318, 321, 324; Pighi (1943), 220, 242 (pl.).

The peculiar distribution of arses and theses can be understood, as E. Pöhlmann pointed out, in the light of Aristides Quintilianus' description of the παίων ἐπιβατός, a paeonic foot composed of five longs instead of five shorts: παίων ἐπιβατὸς ἐκ μακρᾶς θέσεως καὶ μακρᾶς ἄρσεως καὶ δύο μακρῶν θέσεων καὶ μακρᾶς ἄρσεως, that is, -∸---∸.[1] The sequence above can be analysed in terms of the related measure -∸-∸∸ and its inversion -∸∸-∸. Where two disemes are combined in a tetraseme, an arsis-point over one of them naturally disappears: hence the variants ⊔∸-∸ and ⊔∸⊔. These two lines, then, are to be divided into bars of five disemes each. As the pointing shows, the notator (like Aristides) analysed this greater paeon as a compound of 2 + 3 or 3 + 2, just as Bacchius and the Mesomedes scholiast do with the normal paeon.[2] But in the normal paeon there is only one alternation of thesis and arsis.[3] The double alternation in no. 52 confirms that the paeons here are of the half-speed variety, and that (as in nos. 50 and 51) the shorter and longer notes are to be taken as diseme and tetraseme, not monoseme and diseme.

In line 21 Pöhlmann (1970) saw a different rhythm and marked off bars of four disemes, --∸∸; he had to suppose misplacing of an arsis-point over the sixth instead of the fifth note. However, there is no particular difficulty in the assumption that the rhythm here too is paeonic, as in the preceding and following lines. We have only to suppose that the first two notes of the first bar stood at the end of line 20.[4]

Before any attempt was made to decipher the notation of the Berlin papyrus, W. Schubart wrote: 'Wir haben also Auszüge oder Proben vor uns, und der Zweck der Niederschrift liegt ersichtlich nicht im Text, sondern in der Musik. Es sind Beispiele etwa aus einem Handbuch der Musik, vielleicht auch nur für einen bestimmten Zweck aus einem solchen Buch ausgeschrieben'.[5] A retrospective glance at the four pieces can only confirm his opinion. The Paean (no. 50) and the Ajax fragment (nos. 17–18) have nothing whatever in common in respect of their content. The latter is the older of the two by some way, as the metre, the disagreement of melody and word accents, and the implied strophic form indicate. In metre as in notation-key it stands apart from the other three pieces. The Paean repeats the same period eleven times with minor rhythmical variations, and respects the accents. The first instrumental fragment repeats the Paean's notation-key and metre, while the second, though different metrically, is in the same key and the same spondaic tempo.

All four items are of some rhythmic interest, and one might refine Schubart's hypothesis by conjecturing that they were taken from, or designed to accompany, a rhythmician's treatise of the sort that we know from a third-century papyrus, possibly of Aristoxenus, in which lyric examples are quoted as texts but without notation.[6] In this case the rubric ἄλλο would make good sense, and it would be unnecessary to speculate further about possible connections between the vocal and the instrumental excerpts.

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[1] Arist. Quint. p. 37. 7 W.-I.; Pöhlmann (1970), 104 f.

[2] See pp.104, 113 n. 1.

[3] See West 2 (1992), 140.

[4] West 2 (1992), 321.

[5] Schubart (1918), 764.

[6] Pap. Oxy. 9 + 2687; Pearson (1990), 36–44, 77–86.

No. 53 PAP. OXY. 3161 recto Third century AD

Fr. 1

]C Z [
1]ετρεαμεν[

]Z/ I Ż [
2]εα δρυμων c̣[

]Ọ OΦC/∩Φ̄[
3].c̣ω θεω ηχ[

]C̣ I İ İ ⅂̣ İ [
4]c̣ι̣διοιccινεννομ[

]C̄̇∩ Φ C Ȯ Φ̣[
5]ρη τεκνον ελθε̣[

]C̣∩ƱƱ Ʊ̇ Ʊ̇ Ʊ̇ Ẓ̄[
6]ν̣τινιταυτα λαλε.[

]Z Ʊ İ Ż̄∩ C C [
7]ρ̣ιcυνεμοιτοθανε̣[

]I C Ȯ Ʊ̣̄̇ Ʊ[
8]εκνονεμοναι.[

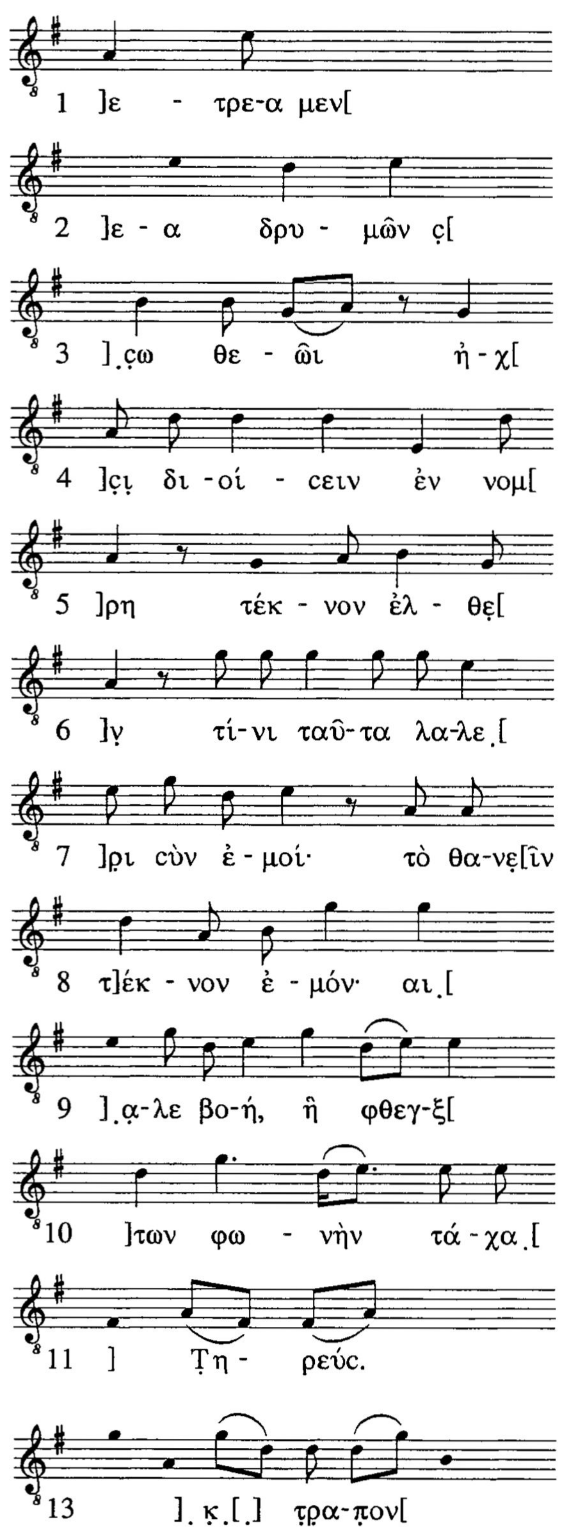
]? Z Ʊ İ Ż̄ Ʊ̄ IŻ Ẓ̄[
9].α̣λεβοη η φθεγξ[

]?̇ Ī Ʊ∩̇ IŻ∩ Z Z[
10]τωνφωνηνταχα.[

]X̣ ĊẊ XC/
11]τ̣ηρευc [

12]α̣παιc [

]Ʊ C/:ƱI I I͜Ʊ Ọ[
13].κ̣.[.]τ̣ρ̣απ̣ον[


1]ε - τρε-α μεν[
2]ε - α δρυ - μῶν c̣[
3].c̣ω θε - ῶι ἠ - χ[
4]c̣ι̣ δι - οί - cειν ἐν νομ[
5]ρη τέκ - νον ἐλ - θε̣[
6]ν̣ τί-νι ταῦ-τα λα-λε.[
7]ρ̣ι cὺν ἐ - μοί· τὸ θα-νε̣[ῖν
8 τ]έκ - νον ἐ - μόν· αι.[
9].α̣-λε βο-ή, ἢ φθεγ-ξ[
10]των φω - νὴν τά - χα.[
11] Τ̣η - ρεύc.
13].κ̣.[.] τ̣ρ̣α-π̣ον[

NB: Haslam = Haslam 1 (1976).

Notation 3 Ọ or ∩̣ West 4 C̣ or Ẓ and ⅂̣ or Ị̇ Haslam, 59 5 Φ̣[or İ[Haslam, 59 6 C̣ or Ẓ Haslam, 59 11]X̣ or]C̣ West ĊẊX̣C West, CẊẊĊ Haslam, 59 13 Ọ[or C̣[Haslam, 59.

Text 3].c̣ω Haslam, 58, or].ε̣ω West 4 διοίcειν ci. Haslam, 61, Δίοιc{c}ιν and νομ[οῖc(ι) Kannicht (1981), 276 f. 6 not ει̣[Haslam, 59 7 θανε[ῖν Haslam, 61 9]χ̣α̣λε or]α̣λ̣λε West βοὴ ἣ or ἡ (rather than βοηὴ) Haslam, 62 12 ἄπαιc or] α παῖc Haslam, 61, or ν]άπαιc West.

Fr. 2. 1–10

]? ? [
1].ι̣τ̣υω̣..[

]Φ X̣ Φ̣[
2].[.].[..].υ̣ν̣[

]?̇ K̇ [ ]Ẓ Z [
3]τ̣α̣ρβω[.]εγαλ[

]O :OƱ̇ C̄:Ọ̄∩̣̇[
4]φαεθον[

]Ị̇ Ʊ I [
5].γ̣ωντηcε̣[

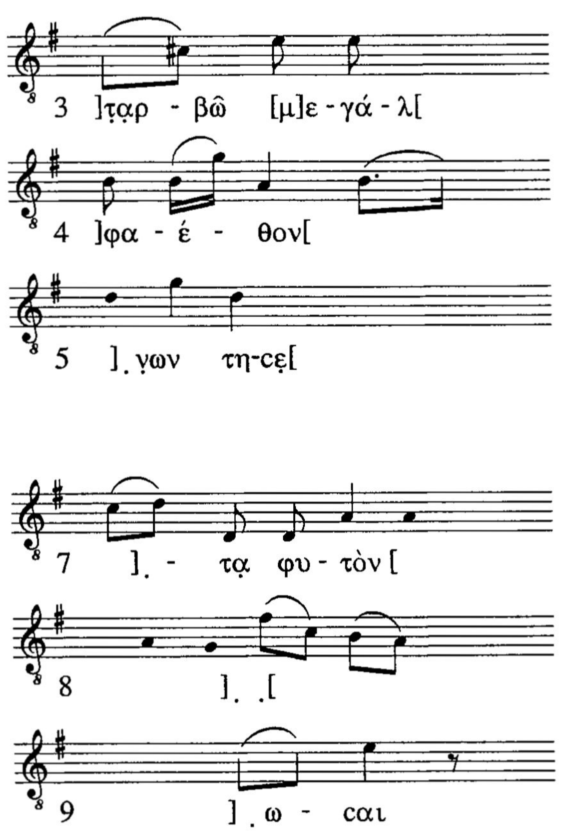
[
6].[

]Ẓ̇Ị 7̇ 7̇ C C̣[
7].τα̣φυτον[

]C̣ Φ̣ Ạ Ẓ̇ O͡C̣[
8]..[

]?͜ Ẓ ∩[
9].ωcαι [

10].καθωcκ[



NB: Haslam = Haslam 1 (1976).

Notation 3 K̇ or Ʊ̇ Haslam, 59 4 :Ọ̄ ∩̣̇ West, ? O ∩̣̇ Haslam, 59 5]Ị̄ Haslam, 59,]Ị̇ or]Φ̣ West 9 Ẓ or Ẓ̇ or Ʊ̣ West.

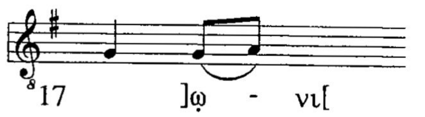
Text 3 ταρβῶ [μ]εγάλ[ωc, -α, sim. Haslam, 61 4 φα- or Φα- Haslam, 61 10 καθώc (prose) Haslam, 61: or -κάθω Cκ[υρ- West.

Fr. 2. 11–17

11] δη[

12/13]Χ̣°cκυρονμ̣[
14] μολεδηι̣δ̣[
15] μεṭαγηνλ̣[
16] τοναχιλλ[

]Φ̄̇:ΦC[ ] ?̄[
17]ω̣νι[



NB: Haslam = Haslam 1 (1976).

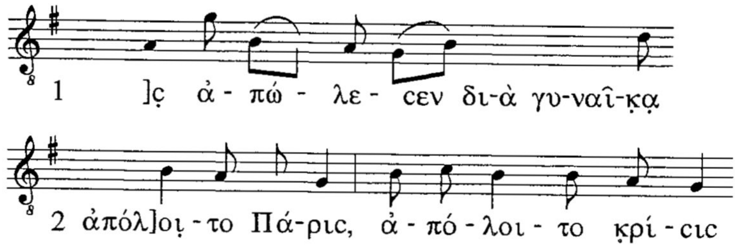
Text 11 Δη[ϊδάμεια ? Haslam, 61 13].cκυρον.[Haslam, 59, Χ̣° Cκῦρον μ̣[West 14 ἔ]μολε Δηϊ̣δ̣[άμεια Haslam, 61, μόλε δ' ἧι̣ ṭ[Kannicht (1981), 278 15 or μεγαṭηνλ̣[West, μεṭαṭηνλ̣[Haslam, 59 16 'Αχιλλ[εῖ-ον sc. παῖδα sim. Kannicht (1981), 278.

Fr. 3

]!̣ Ʊ̣ O ?Ċ̣ Φ̄Ọ̄[ ] ? !̣[
1]ç απωλεcενδιαγυναικ̣α̣

]O C ? Φ O Ξ Ọ̇ Ọ̇ Ċ Φ
2]οι̣τοπαριcαπολοιτοκ̣ριcιc

Notation 1 !̣[or Φ̣[West.


1]ç ἀ - πώ - λε - cεν δι-ὰ γυ-ναῖ-κ̣α̣
2 ἀπόλ]οι̣ - το Πά-ριc, ἀ - πό - λοι - το κ̣ρί - cιc

Text 2 ἀπόλ]οιτο Haslam 1(1976), 61.

Fr. 4

1].π̣ν̣[.]...[

]?Ξ̣ !̣ Ξ̣̄ ?̇ Χ̣ I Ξ̣[
2]π̣ο̣cαç̣ω̣μ̣α̣ṭα̣ποcαπν̣ευ.[

]Ọ̄OΞ ΞẒ Φ̄̇ 7̣ΦCÇ Ż Φ̣[
3]δ̣ω̣ν̣......ν̣ηρε̣υ̣ç̣ν̣εκυç̣[

]O Φ:ΞȮC̄̇∩ Φ̣ Φ Ç̇∩ ?∩̇ Z [
4]ι̣ο̣ν..φη̣ν̣μ̣ε̣τανηρειδων[

]!̣̄̇ Ξ̣̄̇ O Ō Ȯ:OÇ Ξ Ī ? |Ξ̇ Ξ̣[
5].εκηνη̣πιον̣εμυρ̣ο̣μην[

]Ẓ!̣ Φ̣̄ Ξ̣I ·O Ξ̣[
6].ε̣ṭε̣ṭη̣ṭελ̣α̣ç̣.[.]cιγη̣ç̣α̣χο̣[

]? ? !̣ ? ?̇ O Ẓ̄̇ O[
7].......α̣φονε̣ç̣χεν[

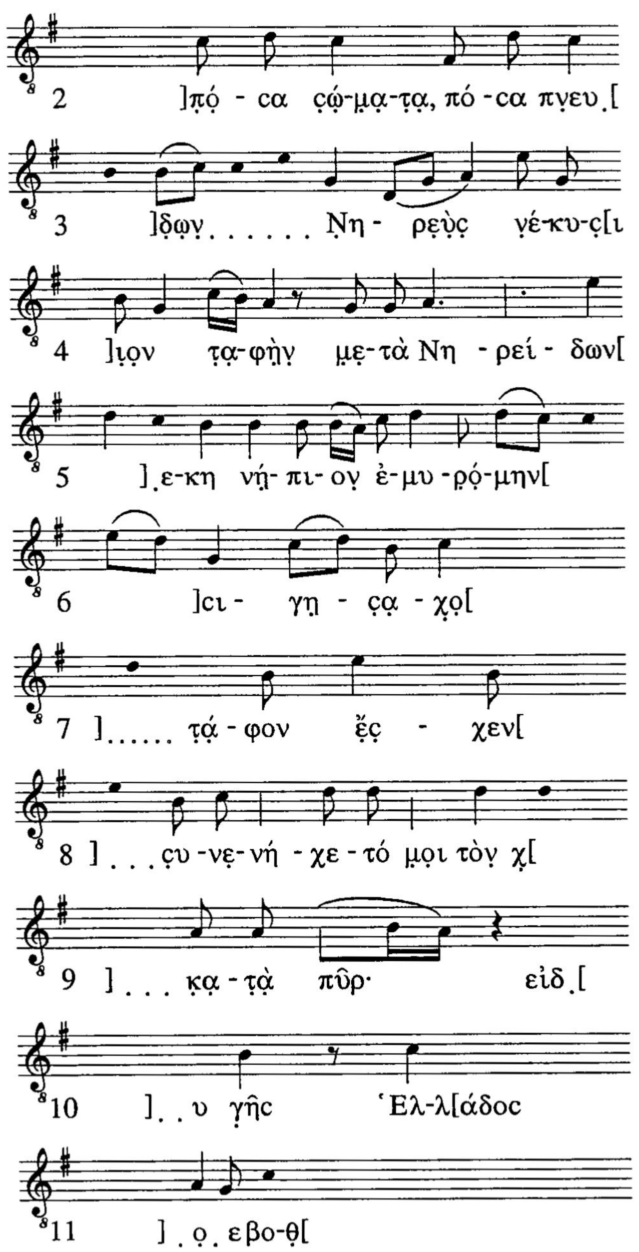
]Ẓ? Ọ Ξ̣ ? İ I ?̇ I !̣[
8]...ç̣υνε̣νηχετομ̣ο̣ιτογ̣χ̣[

]? ? C Ċ/?̄̇ŌĊ̄ ∩̄[ ] ? [
9]...κ̣α̣ṭα̣πυρ ειδ.[

]? ? O∩̇ Ξ̣ [
10]..υ̣γ̣ηcελλ[

]C̄̇ Φ̇ Ξ̇[
11].ο̣.εβοθ̣[

]?̇[
12 . . . .


2]π̣ό̣ - cα ç̣ώ̣-μ̣α̣-ṭα̣, πό - cα πν̣ευ.[
3]δ̣ω̣ν̣...... Ṇη - ρε̣ὺ̣ç̣ ν̣έ-κυ-ç̣[ι
4]ι̣ο̣ν ṭα̣-φὴ̣ν̣ μ̣ε̣-τὰ Νη - ρεί - δων[
5].ε-κη νή̣- πι- ον̣ ἐ-μυ -ρ̣ό̣-μην[
6]cι - γη̣ - ç̣α̣ - χ̣ο̣[
7]...... ṭά̣ - φον ἔ̣ç̣ - χεν[
8]...ç̣υ -νε̣- νή - χε - τό μ̣ο̣ι τὸν̣ χ̣[
9]... κ̣α̣ - ṭὰ̣ πῦρ· εἰδ.[
10]..υ γ̣ῆc 'Ελ-λ[άδοc
11].ο̣.εβο-θ̣[

NB: Haslam = Haslam 1 (1976).

Notation 2]?Ξ̣ Haslam, 60, or]Z̤!̣ West ? Χ W̤est, Ọ ? ? Haslam, 60 3]Ọ O Ξ̣ Ξ Ẓ West,]? O Ξ ? Ξ O ? Haslam, 60 7̣ΦC Ç Ż Φ West, Ξ̣ΦÇ̄̇(or C̄) Ç̇ Ç̄ ?̣[Haslam, 60 5]!̄̇ Ξ̣̄̇ West,]?̄̇!̣ Haslam, 60 : OÇ West, O Haslam, 60 6 Z̤!̣ Φ̣̄ Z̤I West, ? ? ? Haslam, 60 7 Ẓ̄ West, Ċ or Ξ̄̇ Haslam, 60 10 O ∩̇ Ξ̣ West, O Ξ (or Ξ̄) Haslam, 60 11 C̄ Haslam, 60, perhaps C̄ West.

Text 2]π̣ό̣ç̣α̣ ç̣ώ̣μ̣α̣ṭα̣, πόcα πν̣εύμ̣[ατα Haslam, 61 3 νέκυc[ι(ν) Kannicht (1981), 278 4 ṭα̣φὴ̣ν̣ Haslam, 61 7 ṭά̣φον ἔ̣ç̣χεν Haslam, 61 10 γ̣ or ṭ Haslam, 60.

These four fragments, published by M. W. Haslam,[1] are written in a late third-century hand (the same, apparently, for both text and notation). There is occasional spacing between words. More music is on the verso, but in a different hand (see no. 54). The texts were re-edited without the notation by R. Kannicht.[2] T. J. Mathiesen discussed the music, and M. L. West made new transcripts of the better-preserved portions of frs. 1 and 4.[3] He has recollated the papyrus for the present edition.

The verse is dramatic in nature. Frs. 2 and 3 and probably 4 are set in the context of the Trojan War; fr. 1 may belong to the same composition, although the only mythical reference recognizable in it is to Tereus. A lament of Thetis for Achilles is suggested by fr. 4. 4–5 and perhaps fr. 1. 7–8. Deidameia is probably brought in in fr. 2, possibly in the context of Neoptolemus' departure for Troy.[4]

Kannicht observes that the use of πνεύματα for ψυχαί (fr. 4. 2) may indicate a late composition.[5] That it was in tragic form is evident in fr. 2, where a lyric portion is followed by a heading or character-name ΔΗ[(Deidameia?), four lines of what were clearly marching anapaests[6] without music, with paragraphoi before and after, and perhaps the marginal note Χ° (Χοροῦ), and then more song. This may suggest that we have to do with something more continuous than just a selection of tragic arias. On the other hand we should hesitate, in the absence of any remains of iambic dialogue, to assume that the fragments come from a complete copy of a tragedy. The existence of complete texts of tragedies bearing musical notation has yet to be established (though cf. the commentary on no. 5, p. 25).

The melodic notation is Hyperionian: 7 ˥ Χ Φ C Ο Ƶ Ι Ζ Α Ʊ (*d e f# g a b c′ d′ e′ f#′ g′*), with perhaps an Ionian Κ (*c#′*) at fr. 2. 3. If the low notes are correctly read (fr. 1. 4; 2. 7; 4. 3), the total range extends over an octave and a fourth. Besides there are several leaps of a sixth or a seventh. There is some agreement of melody with word accents, but clashes in fr. 1. 3 (unless θέω), 5 τέκνον, 10 φωνήν; 4. 2 πόcα (twice), 4 ταφήν.

The usual rhythmical signs are used: diseme, leimma, dicolon, hyphen, stigme. An oblique stroke is used as a separator at fr. 1. 2, 3, 11; 4. 9. The second syllable of Nereus' name at fr. 4. 3 receives special melismatic treatment, with four note symbols (the last two apparently the same) and a tetraseme above. Probably the syllable was prolonged to double its normal length, a phenomenon for which we find parallels with proper names elsewhere.[7]

There is at least one case of a long syllable *in pausa* divided between three notes (fr. 4. 9), and three cases of a short syllable divided between two (fr. 2. 4; 4. 4, 5). In several places a note or note-group of diseme value is followed by a leimma, which sometimes coincides with word-end, so that it could signify a pause, but in other cases does not, and must there be understood as prolonging the note. At fr. 1. 3 (if rightly read) it occurs after the oblique stroke and before the first note over the word ἠχ[; here it must surely denote an actual pause, corresponding to the gap left between the words.

The stigmai do not give much assistance in elucidating the metre. There are some possible instances both of –∪∪∸∪̇∪̇ (fr. 1. 6; 2. 7; 3. 2) and of –∪∪̇∸ (fr. 1. 7–9), for which see on no. 41; but there is much that does not fit into these patterns. Dactylic or anapaestic movement prevails, but lines such as fr. 3. 1 and 4. 2, 5, are clearly something else. A short-vowelled closed syllable is treated as long before initial vowel at fr. 1. 8 ἐμόν and, one would suppose, at fr. 3. 2 Πάριc.

---

[1] Haslam 1 (1976) and pl. VI (omits the left side of fr. 4, which was not at first identified).

[2] Kannicht (1981), 276–9 (F 684).

[3] Mathiesen (1981); West 2 (1992), 322 f.

[4] Cf. no. 39.

[5] Kannicht (1981), 277; but contrast his note on the following page (on F 684. 34).

[6] Recognized as such by Kannicht (1981), 276.

[7] No. 17. 17; 39. 4, 5, 7. See West 2 (1992), 203; above, pp. 59, 130.

No. 54 PAP. OXY. 3161 verso Third century AD

Fr. 1

]Φ̄ Ị̄ Κ ⅂̣[
1].ε̣ι̣τονλυδ.[

]?̇ Φ̣̇ Χ ⅂̣[
2]..τ̣οδηννο̣[

]? ? ∩ [
3]τ̣.υ̣..– [

]? Ο̣ ? Φ[
4].....νε[

]? ? :ΧΦ[
5]α̣νι̣λιδω̣ν[

] Φ [
6]τ̣α̣λ̣ι̣δων τ̣α̣[

] ⅂̣ Α̣ ℧̣ ?[
7]₍.₎ω̣ι τα λυδ[

]Φ̣ Κ Φ̣ Φ̣̄̇[
8]ψ̣ε̣τ̣αι κωμο̣[

] ? [
9].ωι αcιν ω[

] C . O [
10]ρο̣κτυπ̣[

] Ο̣̇ C [
11]χαριν [

Fr. 3

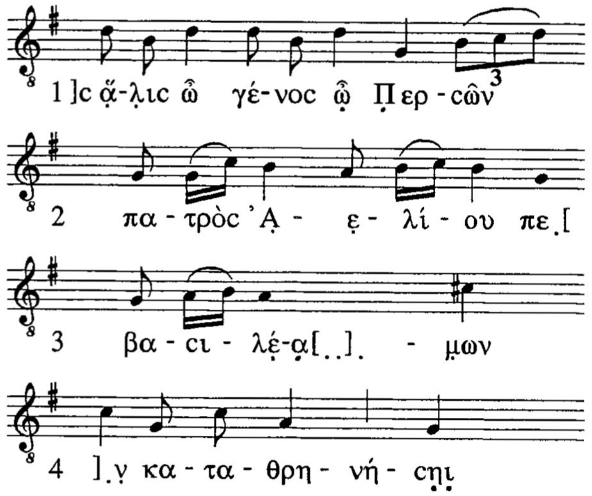
]Ι Ο/ Ι Ι Ο/ Ι Φ ΟƵΙ ?[
1]cα̣λ̣ιcωγενοcω̣π̣ερcων[

] Φ̣ :Φ̣͜Ƶ ΟC̣:ΟƵΟ / Φ[
2]ω̣ πα τροcα̣ε̣λιουπε.[

] Φ :COC [ ]? Κ̣ [
3] βαcιλε̣α̣[..].μ̣ων

]Κ Φ Κ C ⟦Κ⟧? Φ
4].ν̣ καταθρηνηcη̣ι̣

]?[ ]?[ ]???[
5 . . . .


1]cά̣-λ̣ιc ῶ γέ-νοc ῷ Π̣ερ-cῶν
3
2 πα-τρὸc ᾿Α̣- ε̣- λί- ου πε.[
3 βα-cι- λέ̣-α̣[..]. - μ̣ων
4].ν̣ κα-τα-θρη- νή- cη̣ι̣

NB: Haslam = Haslam 1 (1976).

Fr. 1 *Notation* 1 Ị̄ or 7̣ or ⅂̣ Haslam, 67 ⅂̣ West 11 Ο̣̇ C West, !̣ Ο̣ Haslam, 67.

Text 9 πατρ]ώια̣ς̣ e.g. Kannicht (1981), 280 (but note spacing) 10 χει]ρο̣κτυπ[or]ρ ἐ̣κτυπ[Kannicht (1981), 280.

Fr. 3 *Notation* 1 Ƶ West, Κ Haslam, 67 2 Φ̣͜Ƶ ΟC̣:ΟƵ West, ΦΚ ΟC :Ο? Haslam, 66 3 C (above ε̣) West, Κ Haslam, 66 Κ̣, perhaps !C̣ or !Ẓ West.

Text 1]cα̣λ̣ιc West,]c.ω̣c Haslam, 66,]ε̣ὐ̣ω̣ c᾿ Kannicht (1981), 279 2 ᾿Α̣ε̣λίου? Kannicht (1981), 279, α̣θ̣λιου Haslam, 66.

These fragments are written on the reverse side of those printed as no. 53, in a different hand and the other way up.[1] On frs. 2 and 4 only scattered traces are visible and no transcription is possible.[2] After fr. 1 line 11 empty space; fr. 3 line 4 ends with a coronis. The text may again be tragic, but references to Persians and Lydians show that the subject matter was different from no. 53. Anapaestic metre may be recognized in fr. 3. 1 and 4, perhaps in the whole fragment if βαcιλέα be scanned ∪∪– in 3 (only one note is visible over εα); there are no stigmai.

The notation is prevailingly Ionian. Notes identified are ⅂ Χ Φ C Ο Κ Ι (*e f# g a b c#′ d′*), with Hyperionian Ƶ (*c♮′*) in fr 3. 1–2. There is little rhythmic notation to be seen apart from dicola and the oblique dividers in fr. 3. 1–2. In three places in fr. 3. 2–3 short syllables are divided between two notes.

Melody appears to be in accord with accent in fr. 3. 1 ἄλιc, γένοc, 2 πατρὸc ᾿Αελίου, but in 1 Περcῶν the circumflexed vowel is set to a rising figure, and in 3 βαcιλέα, if we read the notes aright, the highest one is on the second syllable.

---

[1] Publications as for no. 53 (Kannicht (1981), 279 f., F 685); recollated for the present edition by West.

[2] Fr. 2 has traces of line-ends. On fr. 4 a Lydian note R is visible, followed by !̣.

No. 55 PAP. OXY. 3162 Third century AD

]I Z [
1]ε τε θι̣ α̣ ̣[

]Ọ̄ :Ξ̄I Ȯ [
2] ̣ τ ω ν ν υ ξ[

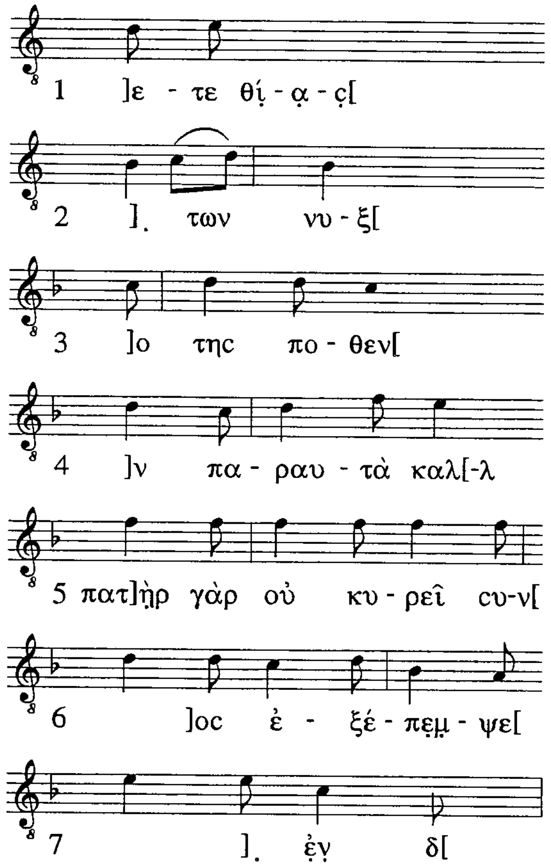
]M İ İ M [
3]ο τ η c π ο θ ε ν [

]! Ṃ İ Ė Z [
4]ν π α ρ α υ τ α κ α λ [

] E E Ė Ė E E [
5]η̣ ρ γ α ρ ο υ κ υ ρ ι c υ ν[

]İ İ M I Ȯ Ċ[
6]ο c ε ξ ε π ε̣ μ̣ ψ ε[

]Ẓ̇ [ ] Ẓ̇ Ṁ [
7] ̣ ε̣ ν̣ δ[


1]ε - τε θι̣ - α̣ - c̣[
2] ̣ των νυ - ξ[
3]ο τηc πο - θεν[
4]ν πα - ραυ - τὰ καλ[-λ
5 πατ]ὴ̣ρ γὰρ οὐ κυ - ρεῖ cυ-ν[
6]οc ἐ - ξέ - πε̣μ̣ - ψε[
7] ̣ ἐ̣ν̣ δ[

NB: Haslam = Haslam 2 (1976).

Notation 2]Ọ̄ or]Φ̣̄ Haslam , 69 4]! or Φ̣ or P̣ Haslam, 69 6 Ȯ rather than Ṗ Haslam, 69.

Text 1 ἄγ]ετε θι̣α̣c̣[ον e. g. Haslam, 69 2 in view of the spacing e. g. νύξ[ε or νυξ[ί, not νύξ West 3 ὁ δεcπ]ότηc πόθεν or better γένοιτ]ο τῆc ποθ' ἕν[εκα e.g. Kannicht (1981), 280 5 πατ]ὴρ or μήτ[ηρ and κυρεῖ for itacistic κυρῖ Haslam, 69 cυν[ηγόρου e. g. West.

This fragment was published by M. W. Haslam together with the preceding items.[1] Text and notation are written by the same hand, which is dated to the mid third century. As in some other musical texts,[2] the syllables are spaced out, the accompanying note being written above the last letter. The nature of the text is unclear.

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[1] Haslam 2 (1976), 67–72 with pl. VI. Cf. Mathiesen (1981), 20 with fig. 4; Kannicht (1981), 280 (F 686, text only).

[2] Cf. nos. 8, 17/18, 42/43, 46, and 50.

The notation is Lydian and Hypolydian: the notes C O Ξ I Z E (*a b c′ d′ e′ f′*) are Hypolydian, while M is the Lydian *c′* associated with P (*b♭*). P is not certainly attested in the fragment, though a possible reading in lines 4 and 6. The only melism is marked with dicolon and diseme (2). Stigmai are for once used clearly and consistently, marking out trochaic metra on the pattern -̇◡̇-x. This is the converse arrangement to that recognized by Aristides Quintilianus, who states that the first half of the trochaic metron was the thesis and the second half the arsis.[1]

The word ἐξέπεμψε (6) is set with its accented syllable on the highest note, and so too is παραυτά (4) if accented oxytone rather than proparoxytone. In the case of των (2), similarly, accent and melody can be in agreement only if it is oxytone, i.e. the end of a word such as κοιτῶν.

---

[1] Arist. Quint. 1. 17 (p. 38. 4 W.-I.). Similar inconsistencies occur with the ancient orderings of thesis and arsis in the iambic and paeonic metres: West 2 (1992), 137 n. 21, 140.

No. 56 PAP. OXY. 3705 Third century AD

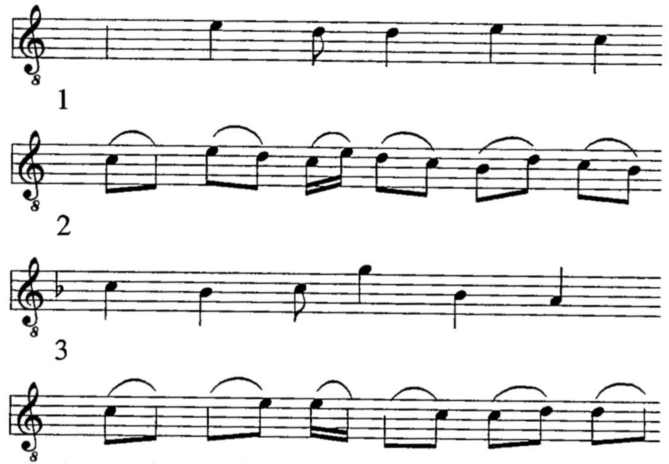
MENANDER, *Perikeiromene* 796

1 ⇃̄ Z ! ! Ẓ Ṃ[
τοῦ δὴ τόπου τί μν[ημόνευμά cοι λέγει;]

2 M͜⇃ Z͜I Ṃ͜Z I͜Ʒ O͜I Ʒ͜Ọ[
τοῦ δὴ τόπου τί μν[ημόνευμά cοι λέγει;]

3 M P Ṃ Ʊ P C [
τοῦ δὴ τόπου τί μνη[μόνευμά cοι λέγει;]

4 M͜⇃ ⇃͜Z Z͜⇃ ⇃͜Ʒ Ʒ͜I I͜[
[τοῦ δὴ τόπου τί μνημόνευμά cοι λέγει;]



It is doubtful whether this should be classified as a musical text, but it is in any case of some interest. The same iambic trimeter[1] is written out four times (perhaps more in the original) with different intonations. The first editor, M. W. Haslam, hesitantly suggested a liturgical purpose, while A. Bélis saw it as a model exercise by a teacher of melography who incorporated in each line a deliberate technical error, so that his students should see what not to do.[2] M. L. West made another transcription, with the suggestion that the alternative settings were designed to illustrate different styles.[1] M. Huys finally put the matter on a new and wholly unexpected footing by identifying the verse as a line from Menander, *Perikeiromene* 796.[2] It comes from the dialogue between Pataecus and Glycera in which he discovers that she is his daughter. He is asking her what her foster-mother had told her of the place where she had found her; it turns out to correspond to the place where his baby twins had been exposed. His question in 796 may therefore have had an emotional tone.

---

[1] Although nothing is left of the fourth line of text, the similarity of the note-placings and of the melodic line to those preceding makes it very probable that it was indeed the same verse.

[2] Haslam 2 (1986), 47 f.; Bélis (1988), 53–63; cf. Haslam (1988), 139 f.

The notation is Lydian, with an admixture of Hypolydian in 2 and 4. It makes use of the peculiar and still unexplained note-symbol ⇃, found also in nos. 45 i 7, ii 4, and 49 i 4 (all Lydian or Hypolydian). Apart from this, the notes represented are the Lydian C P M I Z Ʊ (*a b♮ c′ d′ e′ g′*) with the Hypolydian by-way O Ʒ (*b♮ c′*) as an alternative to P M. If there was any difference in pitch between M and Ʒ, we cannot determine what it was; in 2, at any rate, the switch from M to Ʒ is sufficiently accounted for by the progression to O, though in 4 some other factor must be involved.

Each version has either one note per syllable (1, 3) or two (2, 4). In 4 the second note of each pair is an anticipation of the first note of the next. Each version except 1 starts on the same note; all except 3 have a similar melodic contour, related to the word accents. The exception is a surprising one, with the unaccented second syllable of τόπου assigned a note a third higher than any other in the fragment,[3] and the interrogative τί set relatively low. As in other pieces τί(c) tends to be set notably high,[4] we are tempted to suspect that a mistake has been made and that the Ʊ should have stood over the τί.

We should not have expected iambic dialogue of Menander to be set to music, even though this appears sometimes to have been done with tragic dialogue in the Roman period. If we had found a continuous piece of Menandrian dialogue with musical notation, we should have been obliged to believe it. What this papyrus offers, however, is clearly something different. It seems possible that the intention was to illustrate different ways in which an actor might *speak* the verse, the musical notation being used in an attempt to describe speech intonations. Apart from the one instance of Ʊ, which we have suggested may have belonged to the interrogative τί, the notes are confined within the compass of a fifth; it will be recalled that Dionysius of Halicarnassus gives this as the interval by which the melody of speech is measured.[5]

---

[1] West 2 (1992), 324.

[2] Huys (1993), 30–2.

[3] Haslam's reading of the note as Ʊ seems to be correct. It is written in a similar way in no. 53.

[4] Nos. 4. 9; 6 fr. 45. 3; 42. 2, 8; 53 fr. 1. 6.

[5] Dion. Hal. *Comp.* 58–9 διαλέκτου μὲν οὖν μέλοc ἑνὶ μετρεῖται διαcτήματι τῶι λεγομένωι διὰ πέντε ὡc ἔγγιcτα, καὶ οὔτε ἐπιτείνεται πέρα τῶν τριῶν τόνων καὶ ἡμιτονίου ἐπὶ τὸ ὀξὺ οὔτ' ἀνίεται τοῦ χωρίου τούτου πλέον ἐπὶ τὸ βαρύ.

No. 57 PAP. OXY. 4466 Third century AD

C C Φ̅C̅[
1 νοcακτει[

EZI:ZIP
CΦR
Z
2 τειρεαcε̣[

Ċ̄ C Ī[
3 καιcταγω[

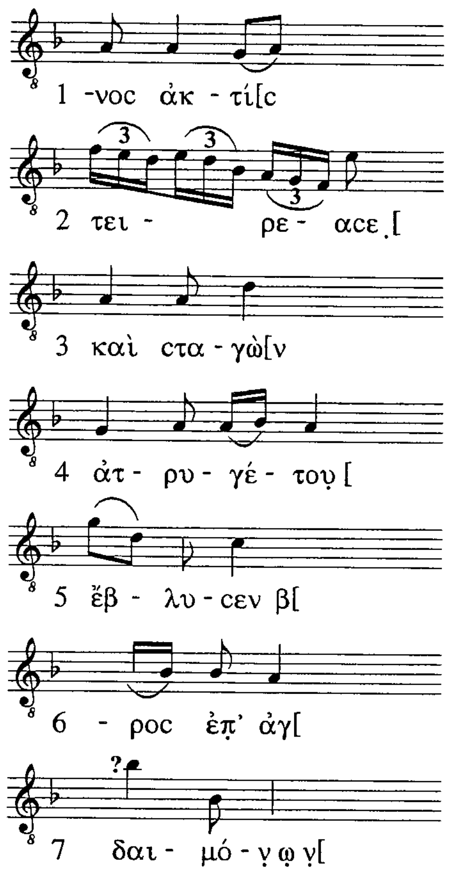
Φ C :CP Ċ̄[
4 ατρυγετου̣[

:ƱĪ ? M [
5 εβλυcενβ[

[ ]P̄ P C̄[
6) ροcεπ̣αγ[

?̄ P ? [
7 δαιμο̣ν̣[]ω̣ν̣[

?̄ I I[ ] I[



Notation 2 Two diagonal lines rising from τειρεαc, one starting above the first ε, the other above α, divide the mass of note-symbols into three groups, corresponding to the three syllables. The readings in the first group are uncertain apart from the double point and the P 7 First, possibly ⅄ ?: possibly ϴ.

Text 1 ἀκτί[c or ἀκτῖ[ν-, preceded e.g. by ʽΥπερίο]νοc or (J. Rea) Κυ]νὸc 2 Most likely τείρεα or -τειρέα(c) (ἀτειρέαc, πολυτειρέαc) 3 καὶ cταγῶ[ν 4 ἀτρυγέτου 5 ἔβλυcεν 7 δαιμόνων rather than δαιμον[ί]ων 5–7 e.g. β[αθυχαίταc δ' ἔκθορε κοῦ]ροc ἐπ' ἀγ[λαὰν χθόνα,] δαιμόνων [δὲ πᾶc ἰάχηcεν χορόc (West); or 7 δαῖμον ὦ Ν[εῖλε? (Rea).

First published by M. L. West;[1] see there for photograph and more detailed notes on the text. The fragment seems to be hymnic in character; it might have been a paean, with mention of the birth of Apollo, or, according to an attractive suggestion by John Rea, a hymn to the Nile, referring in line 1 to the rising of Sirius.

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[1] West (1998), 98 f.

The notation is Lydian; the compass extends from *f* to *g′* or (if ⅄ is correct in 7) to *b♭′*. The tonal centre appears to be *a*. There is—again, if ⅄ is correct—a downward octave leap in 7, and if δαιμόνων is preferred to δαῖμον ων[, it is a leap contrary to the accent. Melody and accent agree in 1, 3, 4, 5; whether they do so in 2 depends on the interpretation of (-)τειρεα(c).

Short syllables are divided between two notes in 4 and 6. But this is as nothing compared with the spectacular melism on (-)τειρεα(c) in 2, where τει- is distributed over six notes and ρε- over three, the voice tumbling down a whole octave in the course of singing these two syllables. The six-note group is divided three and three by the double point.

No. 58 PAP. OXY. 4467 Third century AD

]   [ ]   [
1] ̣ου[] ̣ι̣ουχ̣[

] ⌉̮[] TX̮[
2]π̣ο̣[]υλυ[

]   ? ∩̇X[
3] ̣ ποντ[

]I Z Ȧ Z[
4] ̣ωναπογ[

]?   T? ⌉ ?̄ [
5]ι̣ληcχ̣ερω ̣ [

]Ị̄C TX̮ TC X̄[
6]ι̣ο̣νοcγαρ̣ια[

]X∩̇ T C̄̇ [
7]ενβυθοιcε̣[

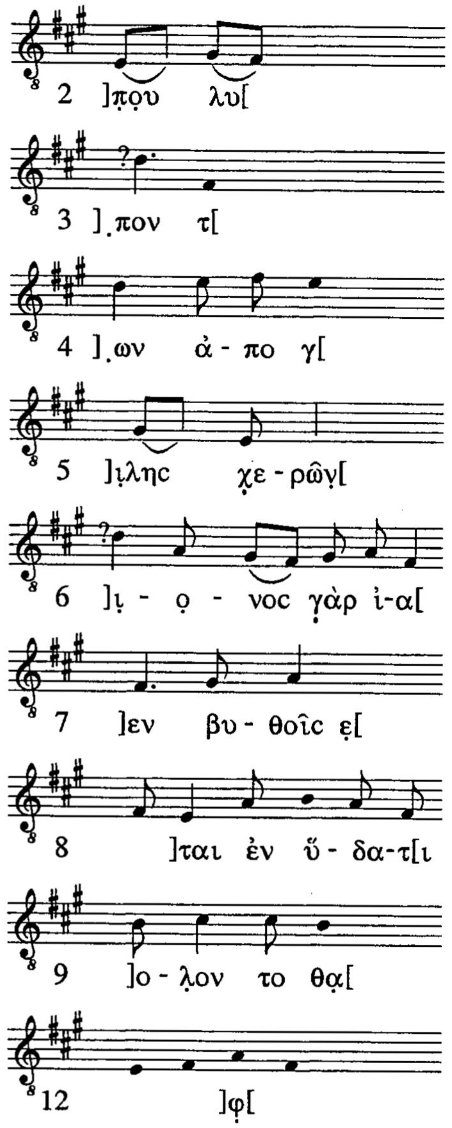
]X ⌉̿̇C ȮC X[
8]ταιενῢδατ[

]O K̇ K̇ Ȯ [
9]ολ̣οντοθα̣[

]   [
10] ̣ οcχοινιον   [

11]θ̣ενδι̣η̣νπο̣[

]⌉XCX[
12]φ̣[



Notation 2 ⌉̮ might also be taken for Z 3 ?: like I with the remains of a small circle at top left 5 The ⌉ uncertain 6 TX̮: less likely TK̮.

Text 1 οὐλίου? 2 The melism over λυ[implies a long syllable; -που λῡ- slightly more probable than a compound in πουλυ- 4 -ων ἀπὸ γ[αίηc? The melodic line, however, might favour ἀπόγ[5 χερῶγ̣ seems likely 6 ᾿Οφ]ίονοc, ῾Υπερ]ίονοc? 7 ἐν βυθοῖc 8]ται ἐν ὕδατ[ι, or ὑδατ[όεντι βερέθρωι, or something of the sort 9 Dative adjective ...]όλοντο θα[νάτωι, or ἐν δίναιc ἀπ]όλοντο θα[λάccηc? 10 Probably τὸ cχοινίον.

First published by M. L. West;[1] see there for photograph and more detailed notes on the text. Lyric, perhaps mythological in content. Three lines (1, 10–11) are without musical notation; 10 is separated from 9 by a wider gap than normal, and may represent the beginning of a separate text. The same perhaps applies to 1, unless it is the first line of the column.

The notation-key is Hypoionian, which is uncommon. The notes extend from *e* to *f#'*; the melody seems to move mainly in the lower part of this range, up to *b*. *f#* seems to be a tonal centre. If 9 is read as]όλοντο, the melody moves against the accent in that verse.

The hyphen is used for melisms in 2 and 6. Use of the diseme and stigme appears sporadic. The leimmata with stigme in 3 and 7 signify prolongation of the preceding note to triseme value, as for example at nos. 27. 7, 9, 14, 18, 19, 22; 28. 3, 10, 13 and 38 ii 6–8.

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[1] West (1998), 99–102.

No. 59 PAP. OXY. 1786 Third–fourth century AD

[   ] ?? ?? ? ? [ ]
1 [–31–]ομουπαcαιτε̣θεο̣υ

[   ]
λογιμοιδ̣ε̣[.] .[.]α̣ι̣...ν̣[....]

[ ] ?̅Ƶ̣̅ I̅Ƶ̅ O̅̇Φ̅ C̣̅Φ̅ ∩̇ Φ̅ :Ƶ̅̇I I̅
2 [–28–] υ τ α ν η ω cιγατω

Ż̅ Z̅E̅ Ż ŻI̅ İ Φ [ ] I̅̇
μηδαcτραφαεcφοραχ̣[..]ζ̣ε

[   ]Ƶ̇ İ :Z̅E̅
3 [c]θ̣ων .[.]λ̣ει̣π̣[.....]ρ̣[–13–]π̣οταμων

:IẒ̇ Ż Ƶ̅O̅ I̅Ƶ̅̇ Z̅I̅ ∩̇Φ̅ :Ƶ̅̇I Φ̅ :O̅̇Ƶ̅ R̅
ροθιωνπαcαι υμνουντωνδημων

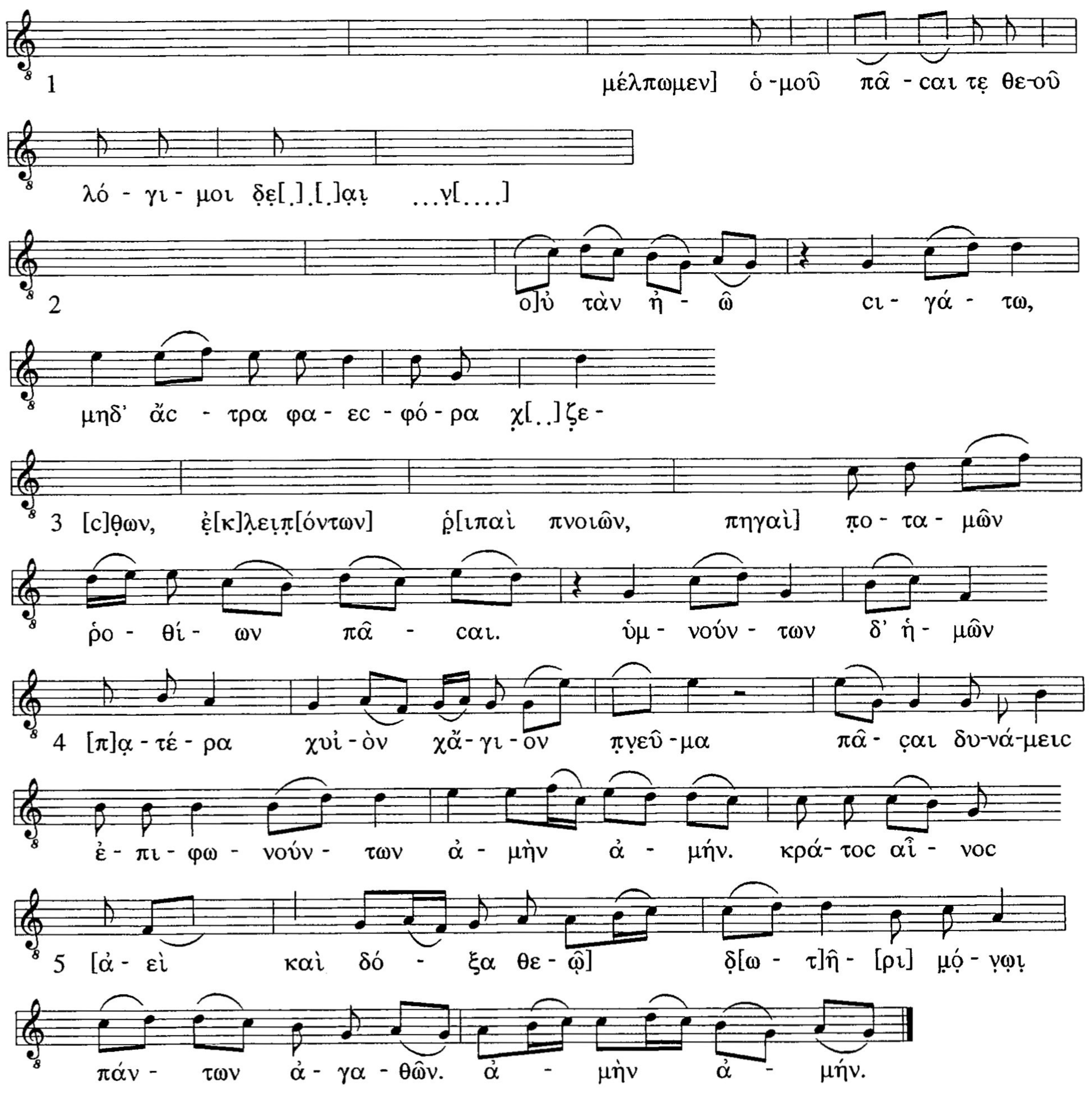
[ ] Ȯ C̅ Φ̅̇ CR :Φ̇C Φ Φ̅Ẓ̅ :?̅?̅ Z̅ ∩̇ Z̅Φ̅ Φ̅̇ Φ̣ ? Ō̇
4 [π]α̣τερα χ̓υιον χ̓αγιονπν̣ε̣υμα παc̣αιδυναμειc

O O Ō̇ O̅I̅ Ī̇ Z̅:Z̅E̅Ƶ̣̅ Z̅I̅ I̅Ƶ̅ Ƶ Ƶ Ƶ̅Ọ̅ Φ
επιφωνουντων αμην αμην κρατοcαινοc

? Ṛ̅[ ]: Φ̅C̅R̅Φ C : C̅Ȯ̅Ƶ̅ Ƶ̅I̅ Ị̅ ỌƵ Ċ̅
5 [-15-   ] δ̣[ωτ]η[ρι]μ̣ο̣ν̣ω̣ι̣

Ƶ̅I̅ I̅Ƶ̅̇ O Φ C̅̇Φ̅ C̅O̅Ƶ̅ :Ƶ̅I̅̇Ƶ̅ O̅Φ̅ C̅Φ̅
παντων αγαθων α μ η ν α μ η ν

Notation 1 ? ? Pöhlmann (1970), 106, perhaps twice a hyphen Wagner (1924), 202 ? ? West 2 ?̅Ƶ̣̅ Wagner (1924), 202, 208–9, Ƶ̣ Hunt (1922), 24 O̅̇Φ̅ C̣̅Φ̅ West, Ọ̅̇Φ̅ C̅Φ̅ Hunt (1922), 24 3 :İẒ Wagner (1924), 203, : I Hunt (1922), 24 Z̅I Hunt (1922), 24, Z̅ I Wagner (1924), 208 f. 4 Ȯ West, C̣ Hunt (1922), 24 Φ̅Ẓ̅ Hunt (1922), 24, Φ̅Ƶ̣̅ Wagner (1924), 208 f. : ?? West, Ị̅? Hunt (1922), 24 ∩̅ Z̅Φ̅ Φ̅̇ pap. explained as ∩̈ Z̅Φ̅̇ Φ̅ by Winnington-Ingram (1955), 81 ? West, Ƶ̣ Hunt (1922), 24, Ọ Wagner (1924), 203 Ī̇ Wagner (1924), 203, Ō̇ Hunt (1922), 24 Ƶ̅Ọ̅ Wagner (1924), 203, Ƶ̅Ọ̅̇ Pöhlmann (1970), 106, Ƶ̇ Ọ Hunt (1922), 24 5 ? Ṛ̅[ ] West, ? Ṛ̅ C̣̅ Wagner (1924), 204, : C̣̅ C̣̅ Hunt (1922), 24.


1
μέλπωμεν] ὁ -μοῦ πᾶ - cαι τε̣ θε-οῦ
λό - γι - μοι δ̣ε̣[.].[.]α̣ι̣ ...ν̣[....]
2
ο]ὐ τὰν ἠ - ῶ cι - γά - τω,
μηδ' ἄc - τρα φα - εc - φό - ρα χ̣[..]ζε -
3 [c]θ̣ων, ἐ̣[κ]λ̣ει̣π̣[όντων] ῥ̣[ιπαὶ πνοιᾶν, πηγαὶ] π̣ο - τα - μῶν
ῥο - θί - ων πᾶ - cαι. ὑμ - νούν - των δ' ἡ - μῶν
4 [π]α̣ - τέ - ρα χυἱ - ὸν χἅ - γι - ον π̣ν̣εῦ -μα πα̣ - cαι δυ-νά-μειc
ἐ - πι - φω - νούν - των ἀ - μὴν ἀ - μήν. κρά- τοc αἶ - νοc
5 [ἀ - εὶ καὶ δό - ξα θε - ῷ] δ̣[ω - τ]ῆ - [ρι] μ̣ό̣ - ν̣ῳ̣
πάν - των ἀ - γα - θῶν. ἀ - μὴν ἀ - μήν.

Text 1 δ̣ε̣ [.].[.]α̣ι̣...ν̣[West, α̣.[...].[..]α̣ρ̣[.... Hunt (1922), 24 2 πρ]υτανήῳ̣ or]υ τὰν ἠῶ Hunt (1922), 24 f., [οὐ τὰν δείλαν ο]ὐ τὰν ἠῶ Reinach (1922), 13, οὐ νύκτα ∪–, ο]ὐ τὰν ἠῶ West, [ἔχει ἀντ' οὐρανίων ἁγίου πρ]υτάνεω Del Grande (1923), 174, [ἔχει πρὸc ἐπουρανίων ἁγίῳ cελάων πρ]υτανήῳ̣ Pighi (1941), 214 f. χ̣[..]ζε (ζ or δ̣) West, λ̣[ειπ]ἐ̣|[c]θ̣ων (λ̣ or μ̣ or χ̣; θ̣ or β̣) Hunt (1922), 24 f. 3 ἐ̣[κ]λ̣ει̣π̣[όντων]ρ̣ West [.].λ̣ε̣ι̣τ̣[.....]ρ̣ (λ̣ or χ̣, τ̣ or γ, ρ̣ or φ or ψ) Hunt (1922), 24 f. [προχοαὶ] ποταμῶν (= Synes. *Hymn.* 1 (3) 80) Crönert (1922), 398, λ̣ε̣ι̣β[έcθων μὴ πηγαὶ] π. Del Grande (1923), 174, [ἀπ]ο̣λ̣ε̣ι̣π̣[όντων] ῥ̣[αδιναὶ προχοαὶ] π. Pighi (1941), 215, [ἀπ]ο̣λ̣ε̣ι̣π̣[όντων] ῥ̣[ιπαὶ πνοιῶν, πηγαὶ] π. Pöhlmann (1970), 106, 109 παcαι pap., παγαί Reinach (1922), 12 5 [ἀεὶ καὶ δόξα θεῷ] Pighi (1941), 215, [νῦν κεὶc αἰῶναc (or δόξαν νῦν κἀεὶ) δίδομεν] δ̣[ωτ]ῆ[ρι] μόνῳ Hunt (1922), 24 f., [δόξ' εἰc αἰεὶ βαcιλῆι θεῷ] Reinach (1922), 16, <κ>αἶνοc [δόξα τε θεῷ] Del Grande (1923), 174, [νῦν κεὶc αἰῶναc. ἀμὴν ἀμήν Wagner (1924), 208.

The papyrus, published by A. S. Hunt and H. S. Jones in 1922, gives us five lines from a Christian hymn to the Trinity, written around the end of the third century AD on the verso of a list of grain deliveries from the first half of the century.[1] It is oriented at right angles to the recto text, using the height of the original sheet to accommodate lines whose length, approximately 30 cm., is exceptional even for a music manuscript.[2] The right-hand margin is preserved. The left half of the first three lines is lost, but the fourth line is complete save for one letter. From the beginning of the fifth line only the notation remains. This was the last line of the hymn, as is shown by a gap after the final word equivalent to about eight syllables.

The notation is Hypolydian, using the notes R (*f*), Φ (*g*), C (*a*), O (*b*), Ƹ (*c*′), I (*d*′), Z (*e*′), E (*f* ′), and the rhythmical symbols macron (diseme), leimma + macron, stigme, hyphen, and colon.

Numerous scholars have contributed to the restoration of the gaps in the text and to the metrical and rhythmical analysis of the hymn. Wilamowitz identified the metre as anapaestic, despite certain irregularities, and pointed to a parallel for the content in Mesomedes.[3] W. Crönert observed the hymn's close affinity with Synesius.[4] In his hymns too the world falls silent for the praising of God,[5] a motif also found in nos. 21 and 26. Several attempts at supplementation on this basis came from C. Del Grande.[6] H. Abert assessed the importance of the discovery for the history of church music.[7] Th. Reinach endeavoured to advance understanding of the text by restoration.[8] R. Wagner, with Hunt's help, checked the readings of the original edition and was able to improve on them in some places.[9] His hypothesis that the central part of the hymn, from ϲιγάτω (2) to πνεῦμα (4), was dactylic, was refuted by K. Münscher and N. Terzaghi.[10] G. B. Pighi followed Del Grande's supplements and arrived at a metrical scheme that avoided the change from anapaests to dactyls and back again.[11] E. J. Wellesz attempted to separate the hymn from all other documents of Greek music, deriving it from Jewish or Syriac hymnody and finding connections with early Byzantine hymns.[12] R. P. Winnington-Ingram put the metrical-rhythmical interpretation of the piece on a firm footing and, against Wellesz, stressed the close kinship between its notational technique and that of the Greek music fragments.[13] M. L. West has shown that the text and the melody too can be fully accounted for from Hellenic models.[14] He has recollated the papyrus for the present edition.[15]

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[1] Hunt (1922).

[2] On column-widths in musical texts see Johnson 1 (2000), 66–8.

[3] Wilamowitz (1922); Mesomedes (no. 26).

[4] Crönert (1922), 398.

[5] Synes. *Hymn.* 1 (3) 72–94 εὐφαμείτω αἰθὴρ καὶ γᾶ ... ἱερευομένων ἁγίων ὕμνων, 2 (4) 28–50 γᾶ ϲιγάτω ἐπὶ ϲοῖϲ ὕμνοιϲ, cf. Mensching (1926); West 1 (1992), 48–50.

[6] Del Grande (1923), (1931), 450–5, (1960), 469–72.

[7] Abert (1921), (1926).

[8] Reinach (1922).

[9] Wagner (1924).

[10] Münscher (1925), Terzaghi (1925).

[11] Pighi (1941). A text of the hymn with Pighi's supplements, but without the musical notation, is printed by Heitsch (1961), 159 f.

[12] Wellesz (1945), (1962), 152–6.

[13] Winnington-Ingram (1955), 75, 80 f., 84 f., 86 f.

[14] West 1 (1992), 47–54.

[15] For the musicological literature B. Stäblein's comprehensive bibliography of the hymn up to 1955 is to be consulted: cf. Stäblein (1955), 1057, 1062.

The parallels with Synesius lead us to expect anapaestic systems. The arsis-pointing is consistent with this assumption, maintaining the pattern ◡̇◡̇– or ∸– down to 4 πνεῦμα. One extraordinary feature is the appearance in two places of acephalic anapaestic metra,[1] marked by a diseme leimma (2 ∩̄ ϲιγάτω, 3 ∩̄ ὑμνούντων). Another is the scansion of πατέρα χυὶὸν χἄγιον πνεῦμα (4) as four anapaests, Procrustean prosody imposed on the poet by the need to use the doxological formula.[2]

The remaining section, from 4 πᾶϲαι, is also to be scanned as anapaests. But here, as Reinach and Pighi saw, the pointing has suffered a displacement by one position, from arsis to thesis, so that ◡◡∸ is written instead of ◡̇◡̇–.[3] Winnington-Ingram found the explanation.[4] The leimma before πᾶϲαι, though marked as diseme, must in fact be taken as tetraseme in order to maintain the anapaestic rhythm; it should have been written ∩. But the scribe continued his pointing series mechanically forward on the assumption that it was a diseme, thus throwing everything out of phase.

Pighi's supplement in line 3 created another difficulty: it suited the available space, but gave an anapaest too few, forcing Pighi to postulate an additional tetraseme pause before ∩̄ ὑμνούντων.[5] The alternative supplement ἐ̣[κ]λειπ[όντων] ῥ̣[ιπαὶ πνοιῶν, πηγαὶ] ποταμῶν[6] avoids this unattractive shift, while incorporating the cessation of the winds as a further characteristic element of the cosmic stillness topos.[7]

In line 5, above the initial lacuna in the text, there are musical notes corresponding to three anapaests. We expect formulae from the doxology that starts in line 4. Of the supplements proposed, only Pighi's αἶνοϲ [ἀεὶ καὶ δόξα θεῶι] fits the rhythmic pattern presupposed by the notation.

Restorations of the long lacuna at the beginning are divided over the interpretation of 2]υτανηω. Reinach, assuming that the hymn should have a Doric dialect colouring similar to that of Synesius' anapaestic hymns (he read παγαί for πᾶϲαι in 3), ingeniously supplemented οὐ τὰν δείλαν, ο]ὐ τὰν ἠῶ.[8] One must then punctuate after ἠῶ and suppose that the subject of ϲιγάτω is understood from something preceding. To connect it with what follows ('Nor let the stars be silent ...') would be stylistically awkward, and it would mean rejecting the motif of the cosmic stillness in favour of a universal chorus, which apart from anything else would weaken the antithesis in ὑμνούντων δ' ἡμῶν. The point is that the praises of God by the faithful will ring out amid the rapt silence of the cosmos, and the Heavenly Host[9] will chime in with the doxology.

Hunt, on the other hand, though with some misgivings, assumed πρ]υτανήῳ, written for πρ]υτανείωι.[10] As Synesius calls God ἄϲτρων πρύτανιϲ, one might admit πρυτανεῖον with the metaphorical sense of ‘centre, chief place’;[1] a city’s prytaneum contained its sacred fire-hearth.[2] However, the double false quantity is highly suspect (especially in view of Synesius’ correctly scanned πρύτανιc).[3] The articulation]υ ταν ηω is also favoured by the spacing between these letter-groups in the papyrus, which is lexical spacing, not syllabic. Neither restoration yields a proper correspondence of melody and accent, though there are clear examples of divergence elsewhere in the hymn: 3 ποταμῶν, πᾶcαι (if not παγαί), ἡμῶν, 4 ἅγιον, ἀμήν, 5 ἀγαθῶν, ἀμήν. If these difficulties could be overlooked, a supplement such as Pighi’s [ὅcα κόcμοc | ἔχει πρὸc ἐπουρανίων ἁγίῳ cελάων π]ρυτανείῳ cιγάτω[4] might have some chance of hitting the sense of the original, if not its wording. The same holds good for E. Pöhlmann’s anapaestic *cento*[5] for the lost beginning: [Cὲ πάτερ κόcμων, πάτερ αἰώνων[6] μέλπωμεν] ὁμοῦ.[7]

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[1] Recognized by Pighi (1941), 207.

[2] Cf. West 1 (1992), 51.

[3] Reinach (1922), 22 f.

[4] Winnington-Ingram (1955), 80 f., 84 f.

[5] Pighi (1941), 215.

[6] Cf. Synes. 1 (3) 76–80; [Aesch.] *Prom.* 88 f.; Soph. *Ant.* 137.

[7] Cf. Synes. 1 (3) 76–80, 2 (4) 38; Orph. *Arg.* 1008; Lucian *Podagra* 129; Aristoph. *Thesm.* 43; Eur. *Ba.* 1084; see nos. 21. 9–11 and no. 26.

[8] Reinach (1922), 13. In fact parallels in Synesius (1. 345; 2. 5; 3. 21; 5. 6) suggest that ἠώϲ (or ἀώϲ) should stand for 'day' and that the complementary term should be νύξ, e.g. οὐ νύκτα ◡–, ο]ὐ τὰν ἠῶ.

[9] Cf. above, p. 192 n. 5.

[10] Hunt (1922), 25.

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[1] Synes. 1 (3) 34, cf. 2 (4) 181 νόου πρύτανιc; Plat. *Prot.* 337d αὐτὸ τὸ πρυτανεῖον τῆc coφίαc (of Athens), cf. Theopomp. *FGrHist* 115 F 281; Aristid. *Or.* 13. 179.

[2] Sch. Pind. *Nem.* 11. 1. Wagner (1924), 218 n. 34, cited Didym. Alex. (39. 589b Migne), who compares πρυτανεῖα with εὐκτήρια, houses of prayer.

[3] If the poet wrote πρυτανήῳ, it might be preferable to suppose that he scanned it normally and that this was a catalectic line, with an additional pause to the one marked before cιγάτω. The double notes above the first two syllables would still be possible in this text, but the diseme signs would be an error of the scribe.

[4] Pighi (1941), 214; Synes. 2 (4) 32 f. εὐφαμείτω ὅcα κόcμοc ἔχει.

[5] Pöhlmann (1970), 106 f.

[6] Synes. 1 (3), 266 f.

[7] Clemens Alex. *Paed.* 3. 101. 3, line 59.

No. 60 PAP. MS. SCHØYEN 2260 Third–fourth century AD

] Ƶ̇ :I?[
1]υ̣ ρ ο ν ε α υ̣[

] AƱ :ƱΘ Ō′[
2]υ̣ ο ν δ ο λ ο ν̣[

]Ο̣ Ο̇ Ο Ο̇[
3]α χ ο ν ο δ ε̣[

]Ζ̣ ƱA!̣ [
4 . . .

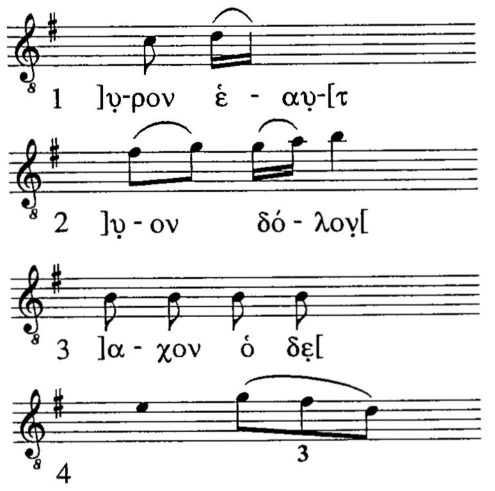

FIG. 18: Pap. MS. Schøyen 2260

Notation 1 ? : perhaps Ο̣[4]Ζ or]Ƶ AI[rather than AƵ[.

Text 1 ἑαυ[τούc or -άc? 2]υ̣ rather than]ρ; e.g. ἤρτ]υον 3 ε̣[rather than ω̣[.

This fragment, formerly in the Issa Marogi Collection in Jerusalem, was acquired by Mr Martin Schøyen for his manuscript collection in 1996.[1] It is to be published by Rosario Pintaudi in a volume of Schøyen papyri. Meanwhile Mr Schøyen has kindly given permission for us to include it in our corpus.

There is little clue as to the nature of the poetic text apart from what look like narrative tenses. The notation is Hyperionian. The preserved notes extend over just an octave: Ο Ƶ I Z A Ʊ Θ Ο′ (*b c′ d′ e′ f#′ g′ a′ b′*). Even within its brief compass the fragment shows clear signs of the florid style: short syllables are divided between two notes in 1 and 2, and there was a three-note melism in 4. δόλον̣ in 2, if rightly read as a complete word,[2] is against the accent.

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[1] See „The Schøyen Collection“ at www.schoyen.net.

[2] δολομ̣[(e.g. δολόμ̣[ητιc) may also be a possible reading.

No. 61 PAP. MICH. INV. 1250 First to third century AD

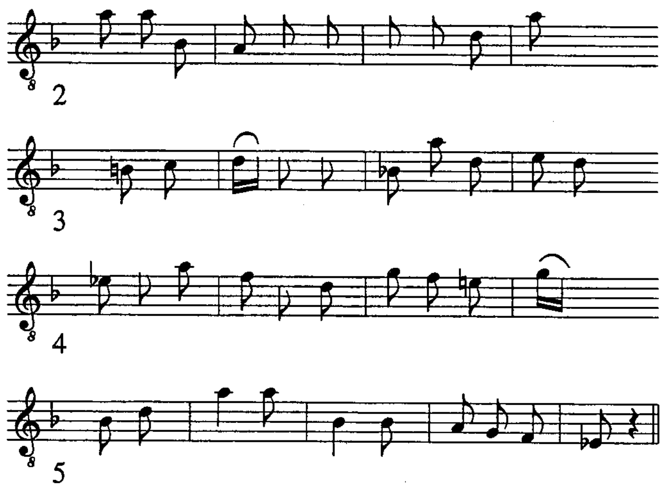
1 ? [?] ? ?[
1 2 3

2 И̣И̇ ∪̇ Ç[? ? ? ?] < И ? ? [
1 2 3 4 5 6 7 8

3 K̇ ⊻̇ : <̣ ? [? ?] ∪ И̇ <̇ ⊏ <̇[
1 2 3 4 5 6 7 8 9 10

4 V ?̇ И̇ N ? < Z ⊔̇ ⊏̇ : Z[
1 2 3 4 5 6 7 8 9 10 11

5 ∪̇ < И̅ И̇ ∪̅ ∪ C Ḟ ⊬̇ ⊥ ?[
1 2 3 4 5 6 7 8 9 10 11



Notation 2. 7 perhaps a leimma 2. 8 И?

This is one of a group of papyrus fragments acquired by the Michigan Library in 1922 from Sir William Flinders Petrie. It has a demotic text (apparently an account) on the back, and was itself put down as 'demotic?' until in 1998 Paul Heilporn recognized it as Greek instrumental music. Its publication is due to W. A. Johnson, to whom we are grateful for making it, and his treatment of it, available to us at an early stage.[1] The papyrus is available on the internet.[2]

The fragment comes from the foot of what was probably the first column of a roll. Johnson estimates that perhaps between seven and thirteen lines may be missing above, while noting that these need not all have been devoted to instrumental music; we know from the Vienna and Berlin papyri (nos. 15/16, 17/18, 50–2) that vocal and instrumental pieces may alternate on the same page. The column may have been considerably wider than the 8 cm. portion preserved.[3] No closer dating of the papyrus than 'first to third century' is possible, as neither the instrumental notation nor the demotic text on the other side affords a palaeographic foothold.

The piece uses a wide range of notes, fourteen in all, with a total compass of one and a half octaves. It was clearly written for a sophisticated instrument, whether an elaborate aulos or a many-stringed cithara (or harp), and a professional performer.[4] The note-symbols are mostly

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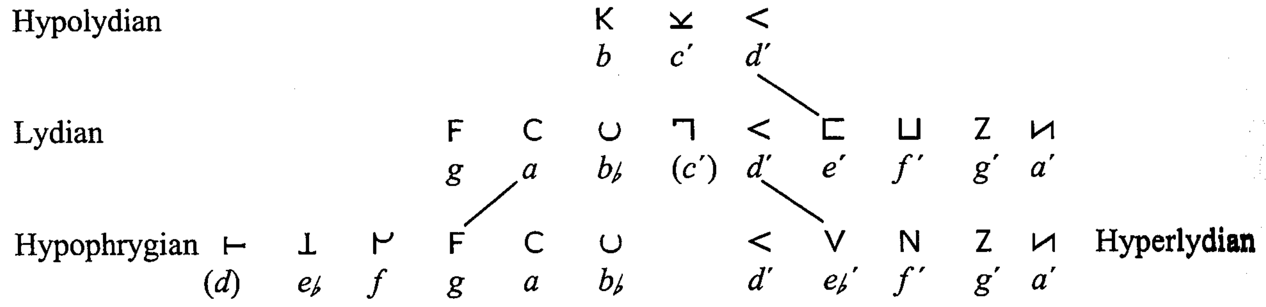
[1] Johnson 2 (2000); forthcoming.

[2] ftp://ftp.hti.umich.edu/staff/sooty/

[3] See Johnson 1 (2000), 66–8, for the great width of columns in musical papyri.

[4] Johnson 2 (2000).

from the Lydian systems but with modulation into Hypophrygian in the last line. The diagram below shows the relationship of the different tetrachords used, with the shared notes that facilitated modulation from one to another. (Notes not attested in the fragment are bracketed.)


Hypolydian
K ⊻ <
b c′ d′
Lydian
F C ∪ ꓶ < ⊏ ⊔ Z И
g a b♭ (c′) d′ e′ f′ g′ a′
Hypophrygian ⊢ ⊥ ⊬ F C ∪ < V N Z И Hyperlydian
(d) e♭ f g a b♭ d′ e♭′ f′ g′ a′

The notes in line 2 are Lydian; line 3 begins in Hypolydian, but after the short lacuna is back in Lydian; line 4 begins in Hyperlydian and modulates into Lydian, the sixth and seventh notes being common to both scales; line 5 begins in Lydian and can be read as Lydian as far as note 8, but the two lower notes that follow are Phrygian/Hypophrygian, and in fact notes 5–8 are common to Lydian and Hypophrygian.

The distribution of stigmai, together with the occasional dicolon (3. 3) and diseme (5. 3, 5), permits a clear analysis of the rhythm.[1] It is in triple time, with a single-note thesis and a two-note arsis. The space after 5. 10 suggests the end of a 'line' of music on the thesis-note. There are usually three notes to the bar (♪ ♪ ♪), but we also encounter ♬ ♪ ♪ (3. 3–5, 4. 10–11) and ♩ ♪ (5. 3–4 and 5–6, approaching the end of the 'line').

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[1] Johnson 2 (2000).

ABBREVIATIONS

AC	*L'Antiquité Classique.*
AE	*Ἀρχαιολογική Ἐφημερίϲ*, Athens.
AfMF	*Archiv für Musikforschung.*
AfMW	*Archiv für Musikwissenschaft.*
AGWG	*Abhandlungen der Gesellschaft der Wissenschaften zu Göttingen.*
AJPh	*American Journal of Philology.*
AM	*Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung.*
AMl	*Acta Musicologica.*
AP	*Anthologia Palatina.*
ARV^2	Beazley, J. D., *Attic Red-Figure Vase-Painters,* 2nd ed., Oxford 1963.
BASP	*Bulletin of the American Society of Papyrologists.*
BCH	*Bulletin de Correspondance Hellénique.*
BICS	*Bulletin of the Institute of Classical Studies of the University of London.*
BPhW	*Berliner Philologische Wochenschrift.*
Bursian	*Jahresberichte über die Fortschritte der klassischen Altertumswissenschaft,* begr. von K. Bursian.
ChrEg	*Chronique d'Égypte.*
CeM	*Classica et Mediaevalia.*
CQ	*Classical Quarterly.*
CR	*Classical Review.*
CRAI	*Comptes Rendus des Séances de l'Académie des Inscriptions et Belles-Lettres.*
CVA	*Corpus Vasorum Antiquorum.*
DLZ	*Deutsche Literaturzeitung.*
EA	*Epigraphica Anatolica.*
FBSM	*Forschungen und Berichte, hrsg. von den Staatlichen Museen,* Berlin.
FdD	*Fouilles de Delphes.*
FGrHist	*Fragmente der griechischen Historiker,* ed. F. Jacoby.
GrGr	*Grammatici Graeci,* Leipzig 1878–1910, edd. R. Schneider et al.
GRBS	*Greek, Roman and Byzantine Studies.*
GrRF	*Grammaticae Romanae Fragmenta,* ed. H. Funaioli, Leipzig 1907.
HbAW	*Handbuch der Altertumswissenschaft,* begr. von J. v. Müller.
IG	*Inscriptiones Graecae,* Berlin 1873–1939; ed. minor 1913 ff.
JEA	*Journal of Egyptian Archaeology.*
JHS	*Journal of Hellenic Studies.*
LZB	*Literarisches Zentralblatt.*
MGG	*Die Musik in Geschichte und Gegenwart, Allgemeine Enzyklopädie der Musik.*
MPER	*Mitteilungen aus der Sammlung der Papyrus Erzherzog Rainer.*
MPhL	*Museum Philologum Londiniense.*
MSD	*Musicological Studies and Documents.*
MusF	*Die Musikforschung.*
NGG	*Nachrichten der Gesellschaft der Wissenschaften zu Göttingen, Phil.-Hist. Klasse.*
NH	*Νέοϲ Ἑλληνομνήμων,* Athens.
NJb	*Neue Jahrbücher für Antike und deutsche Bildung.*
OGIS	*Orientis Graeci Inscriptiones Selectae,* ed. W. Dittenberger, Leipzig 1903–5.
PCG	*Poetae Comici Graeci,* edd. R. Kassel and C. Austin.
PMG	*Poetae Melici Graeci,* ed. D. L. Page, Oxford 1962.
POxy	*The Oxyrhynchus Papyri,* edd. B. P. Grenfell, A. S. Hunt, E. Lobel et al.
RA	*Revue Archéologique.*
RE	*Paulys Realencyclopädie der classischen Altertumswissenschaft.*
REG	*Revue des Études Grecques.*
RFIC	*Rivista di Filologia e di Istruzione Classica.*
RGVV	*Religionsgeschichtliche Versuche und Vorarbeiten.*
RISM	*Répertoire International des Sources Musicales XI: Ancient Greek Music Theory. A Catalogue Raisonné of Manuscripts* by Th. J. Mathiesen, Munich 1988.
RhM	*Rheinisches Museum.*
RIGI	*Rivista Indo-Greca Italica di Filologia, Lingua, Antichità.*
RMI	*Rivista musicale Italiana.*
RMus	*Revue Musicale.*
RPh	*Revue de Philologie.*
SAWW	*Sitzungsberichte der Österreichischen Akademie der Wissenschaften in Wien, Phil.-Hist. Klasse.*
Schriften Königsberg	*Schriften der Königsberger Gelehrten Gesellschaft, Geisteswissenschaftliche Klasse.*
SEG	*Supplementum Epigraphicum Graecum.*
SHAW	*Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Phil.-Hist. Klasse.*
SO	*Symbolae Osloenses.*
SPAW	*Sitzungsberichte der Preußischen Akademie der Wissenschaften zu Berlin.*
TrGF	*Tragicorum Graecorum Fragmenta*, edd. B. Snell, R. Kannicht, and Stefan Radt, Göttingen 1971 ff.
VS	*Die Fragmente der Vorsokratiker*, ed. H. Diels, Berlin 1922^4.
WJA	*Würzburger Jahrbücher*, Neue Folge.
WS	*Wiener Studien.*
ZfMW	*Zeitschrift für Musikwissenschaft.*
ZPE	*Zeitschrift für Papyrologie und Epigraphik.*

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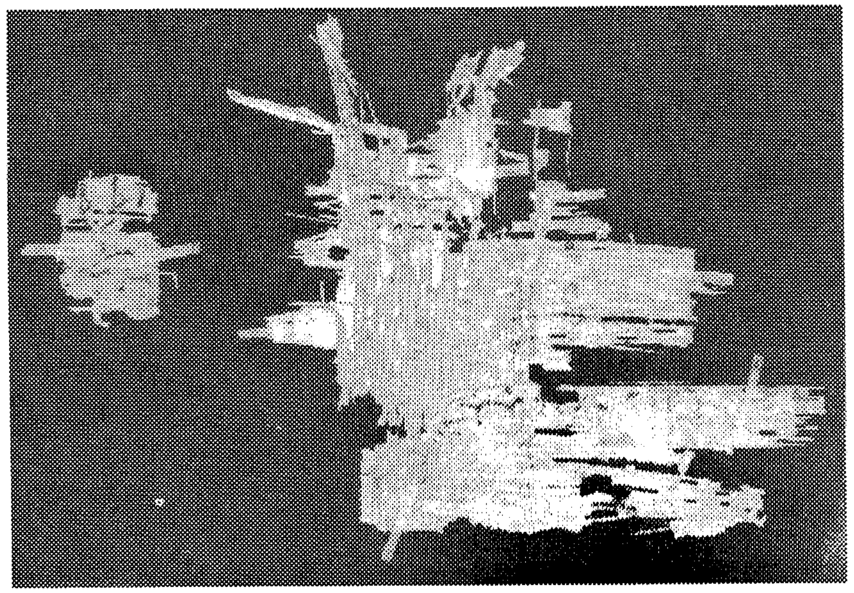

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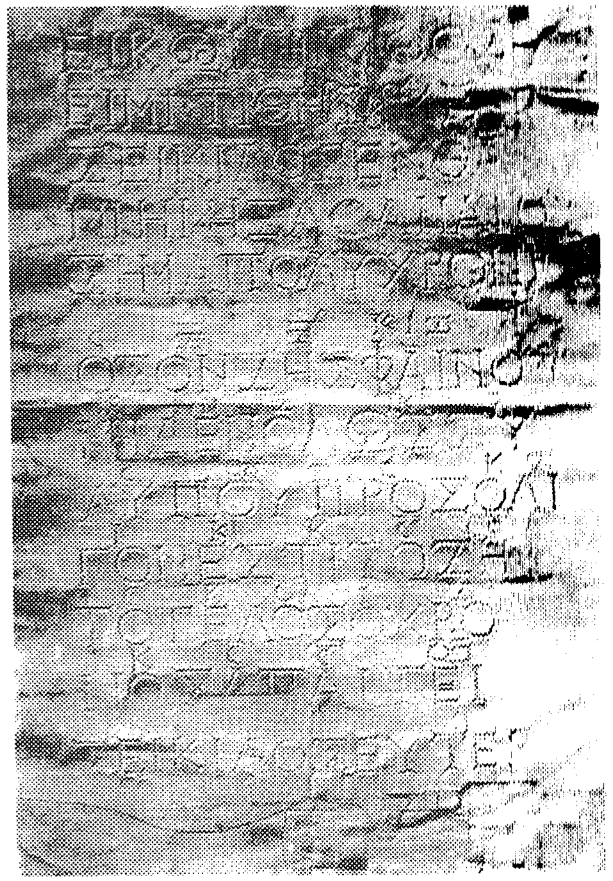

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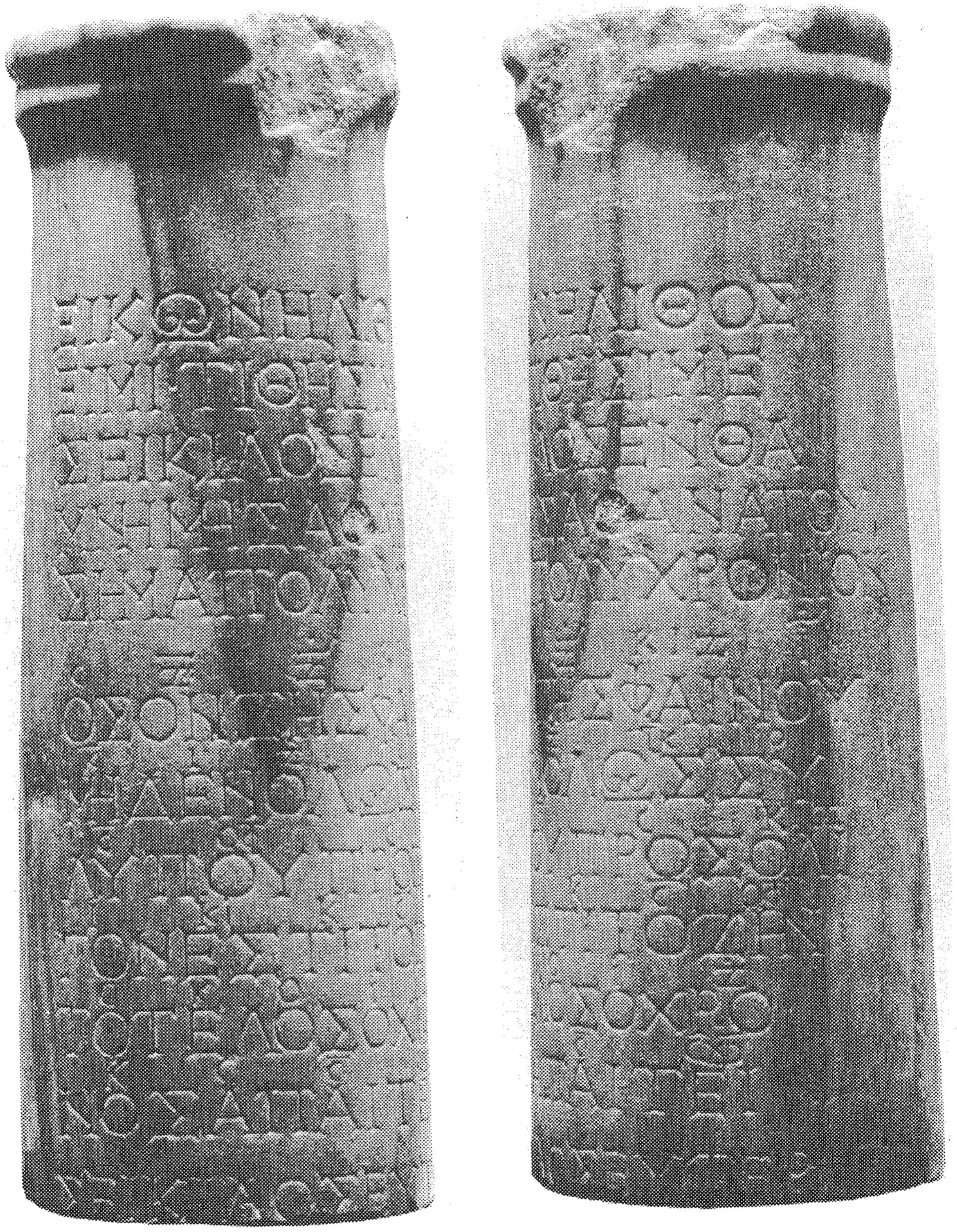

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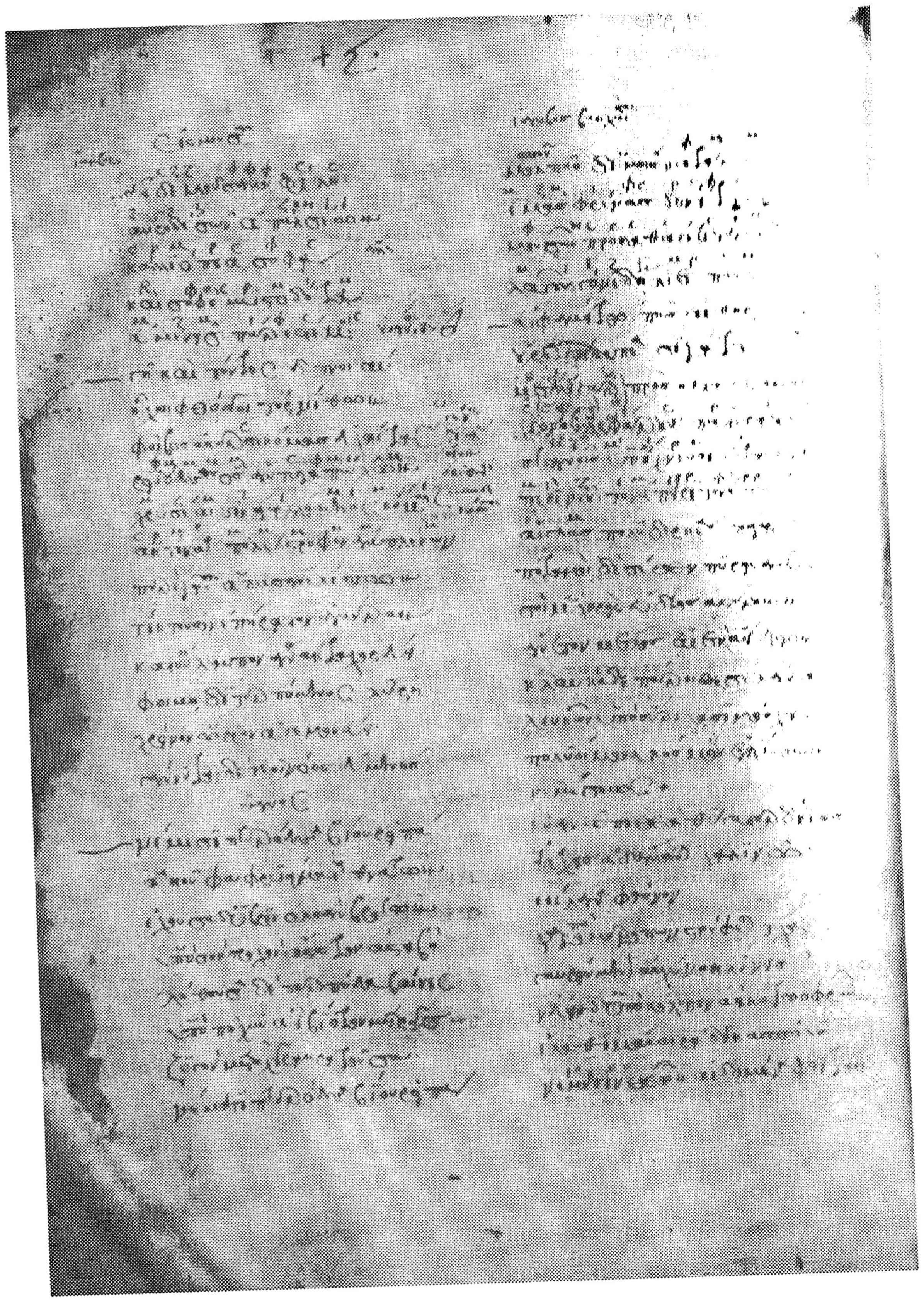

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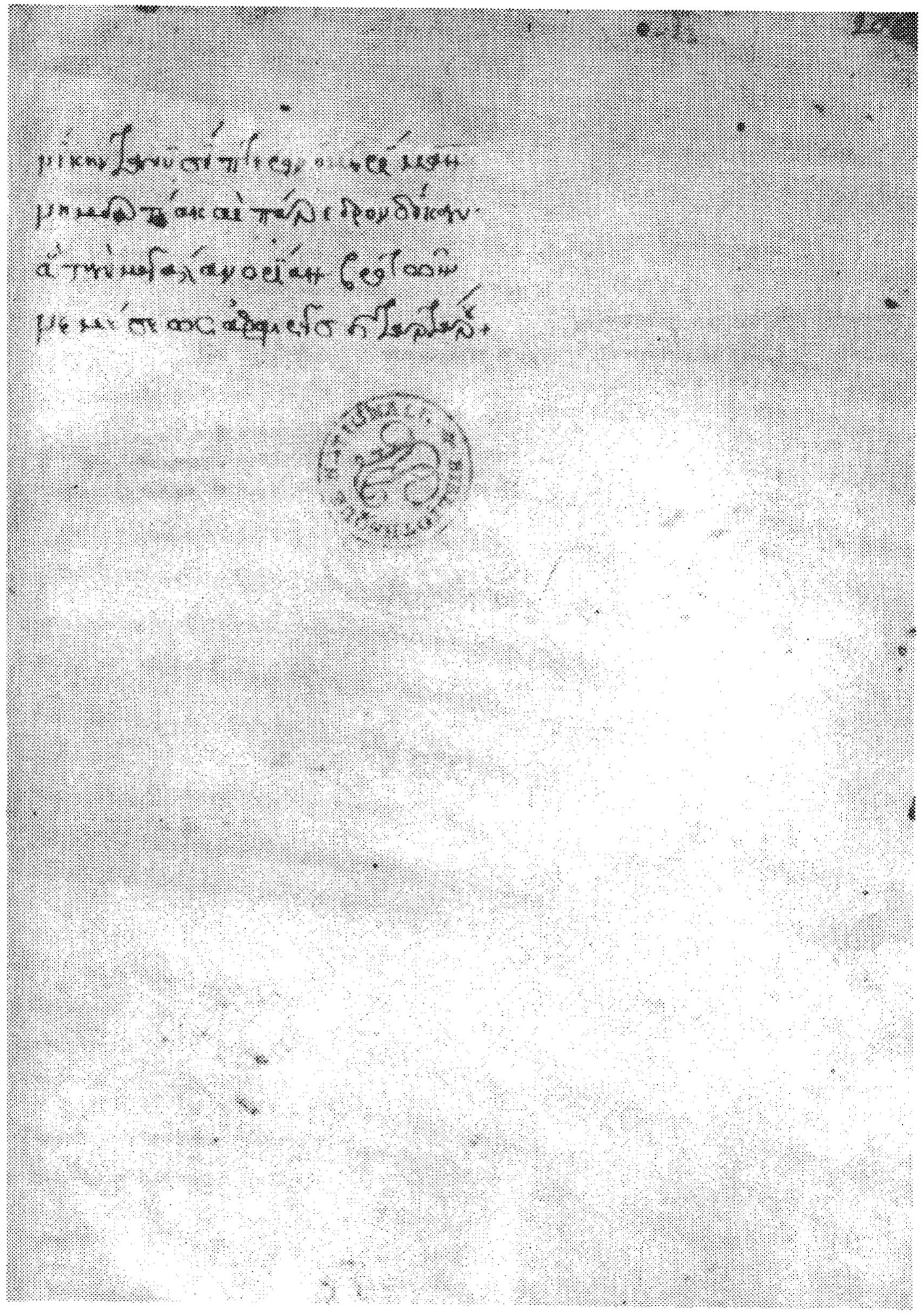

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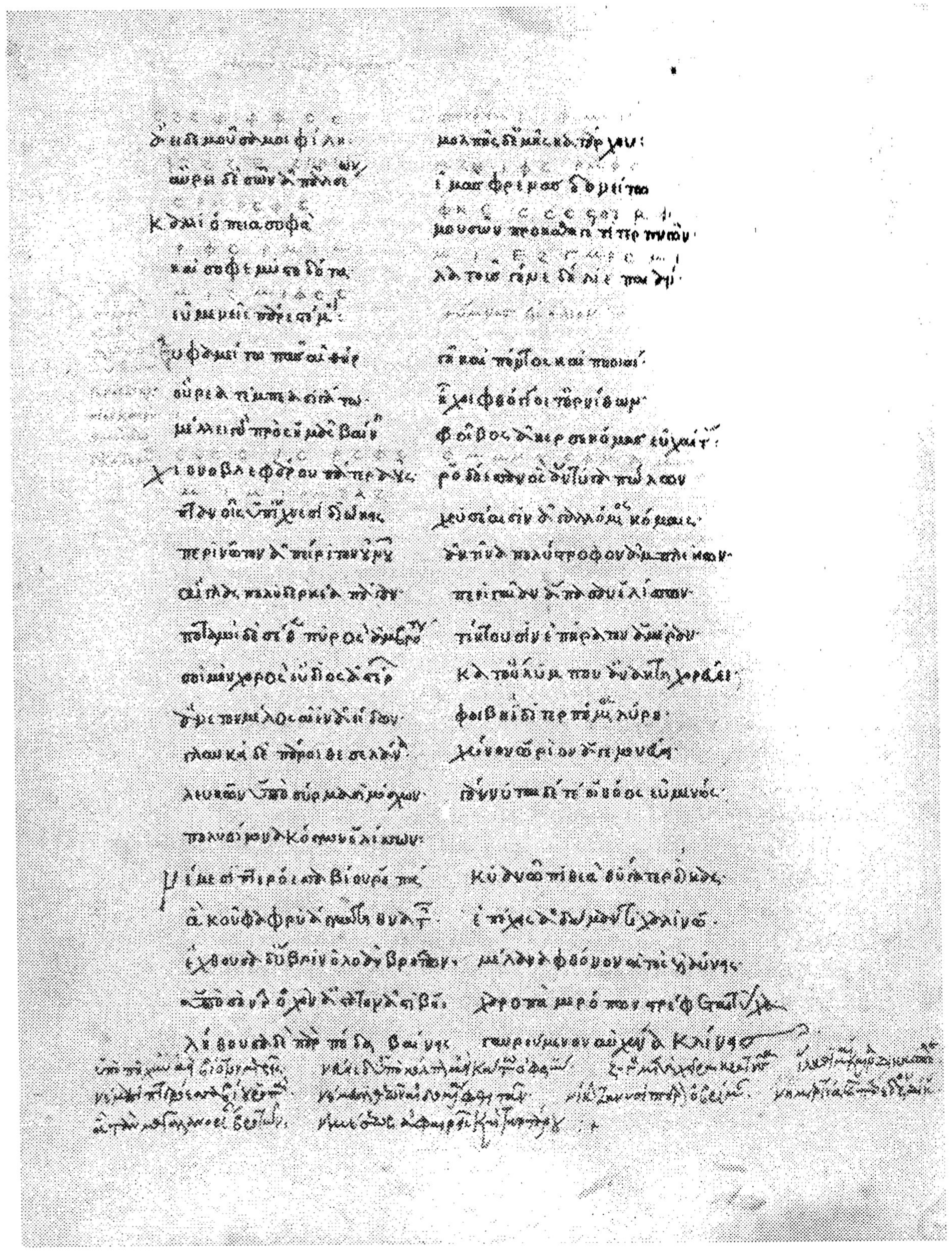

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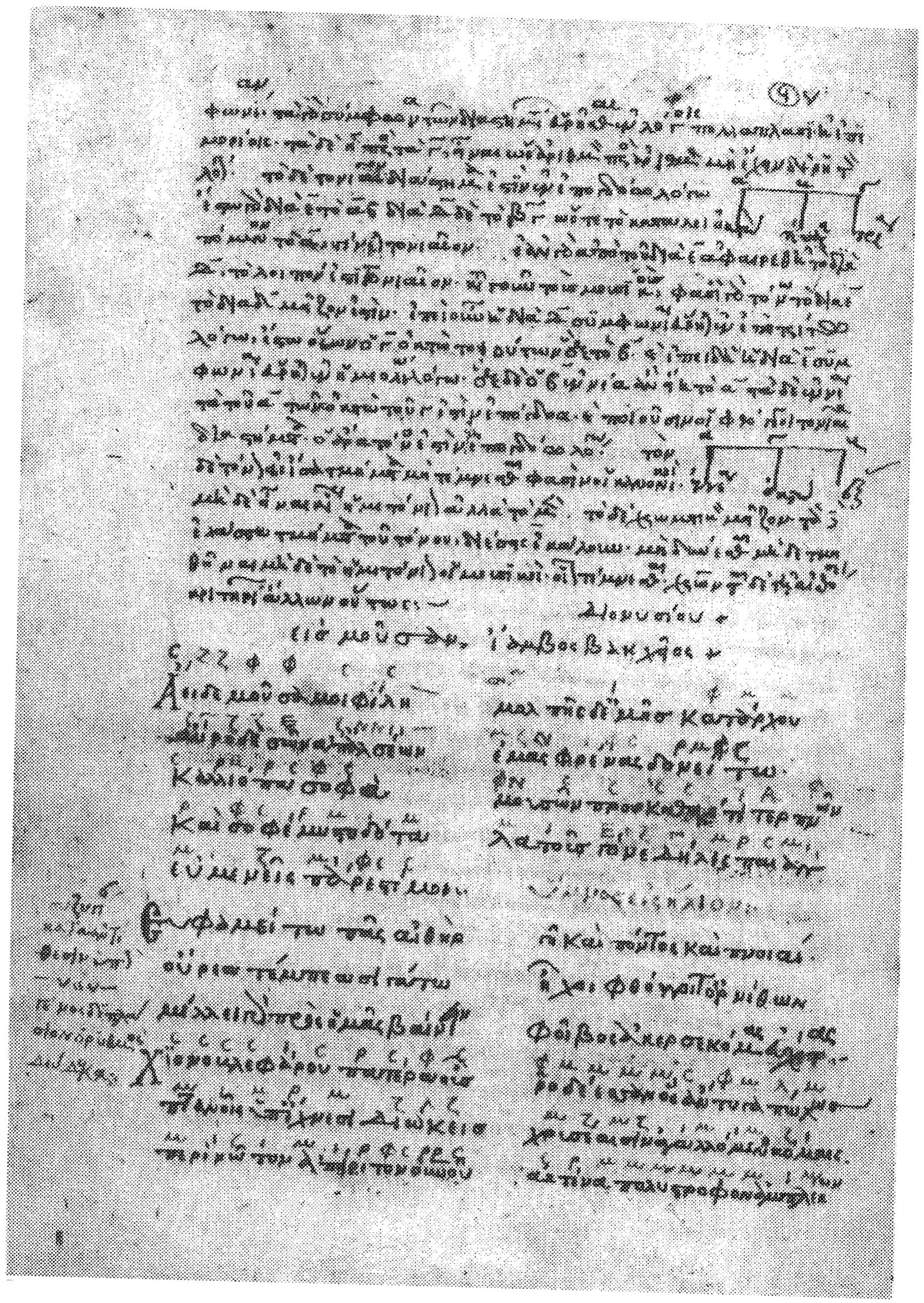

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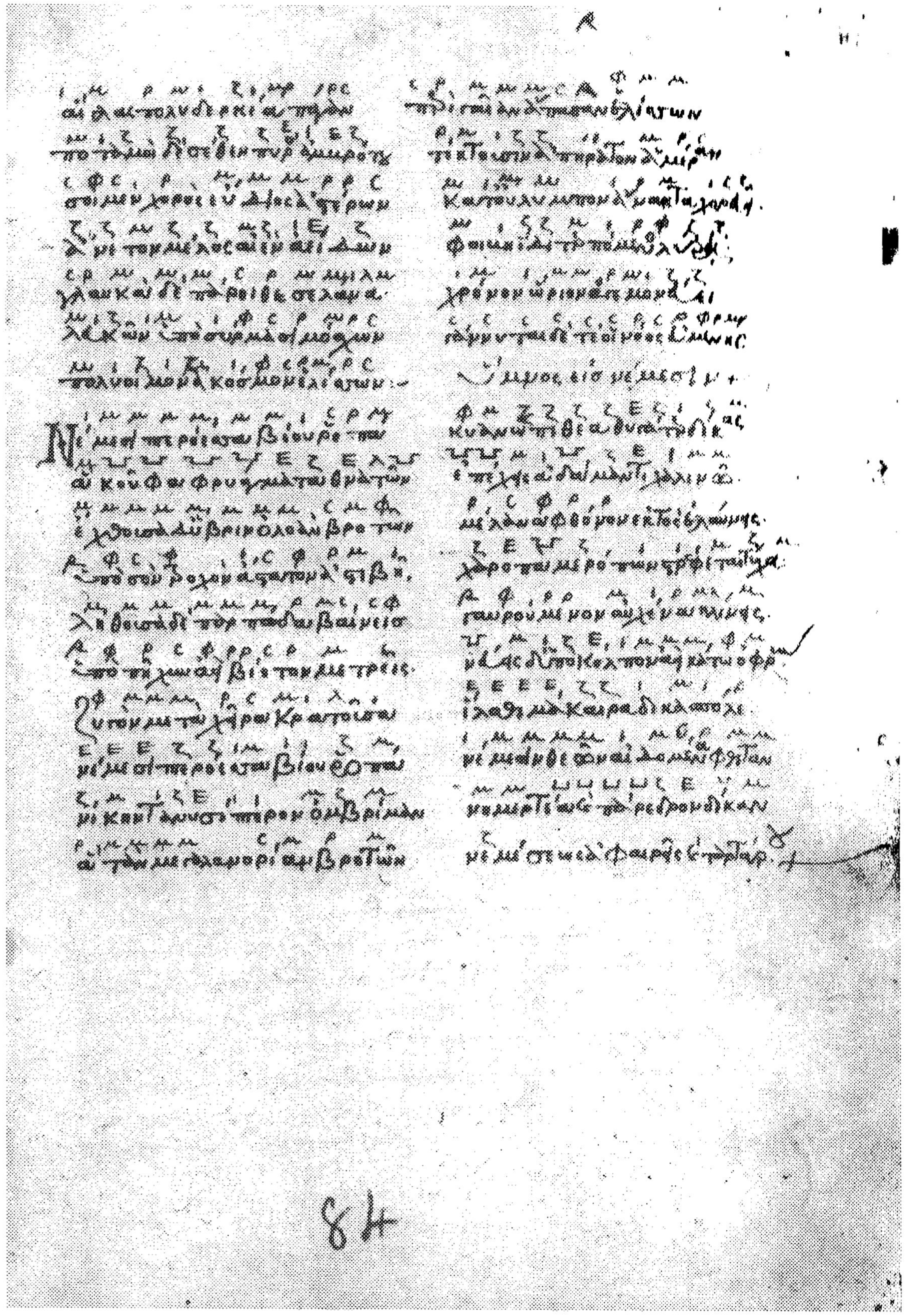

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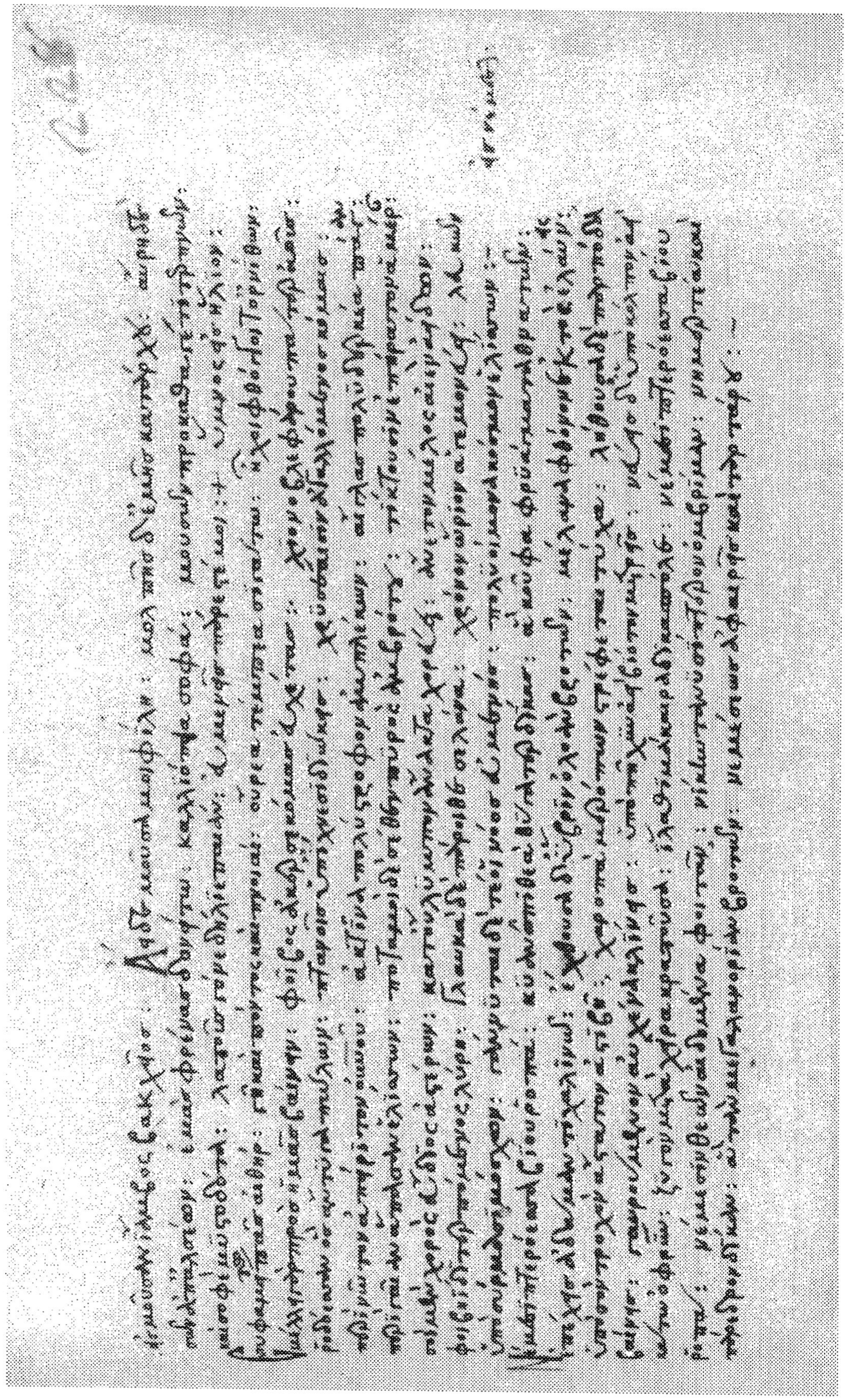

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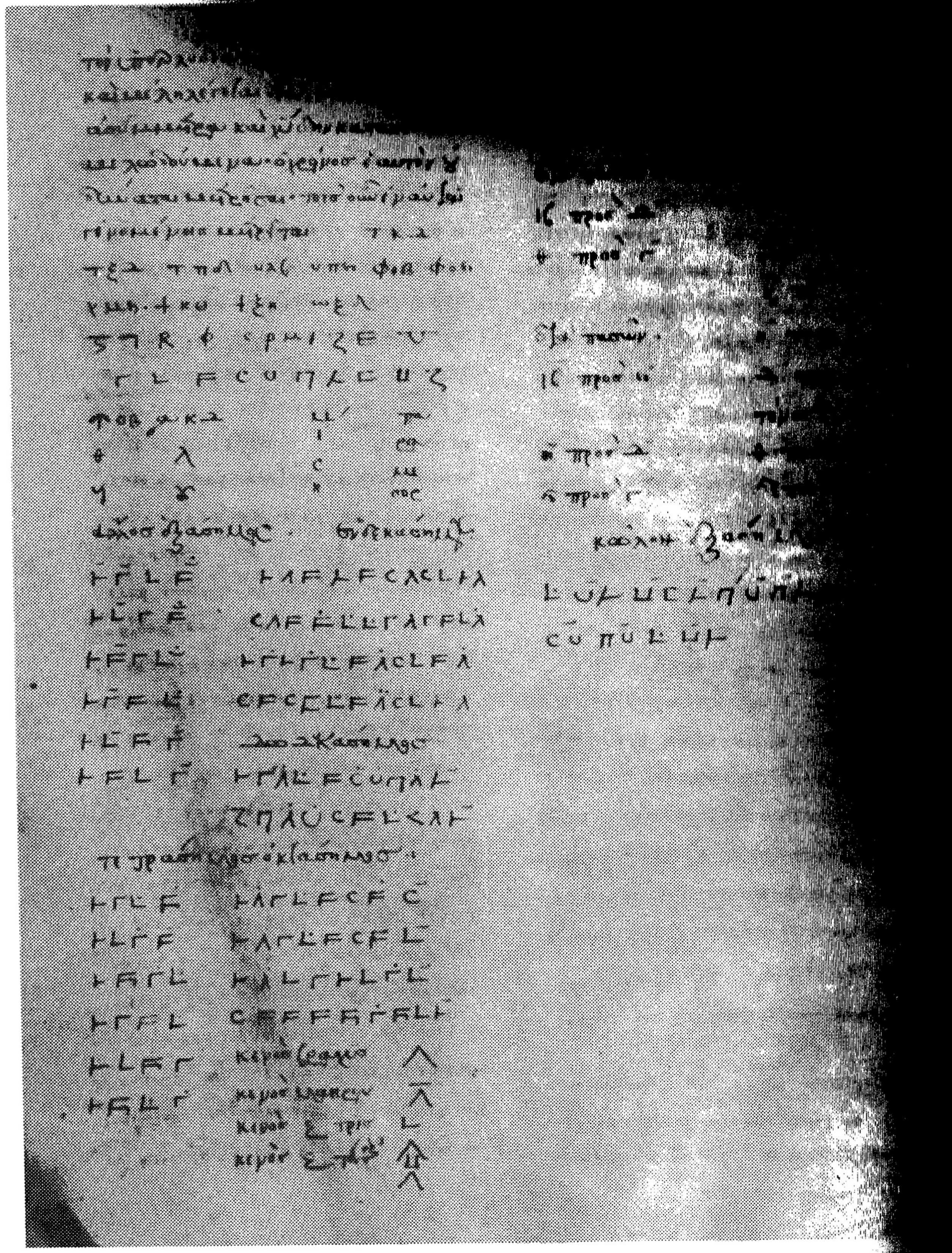

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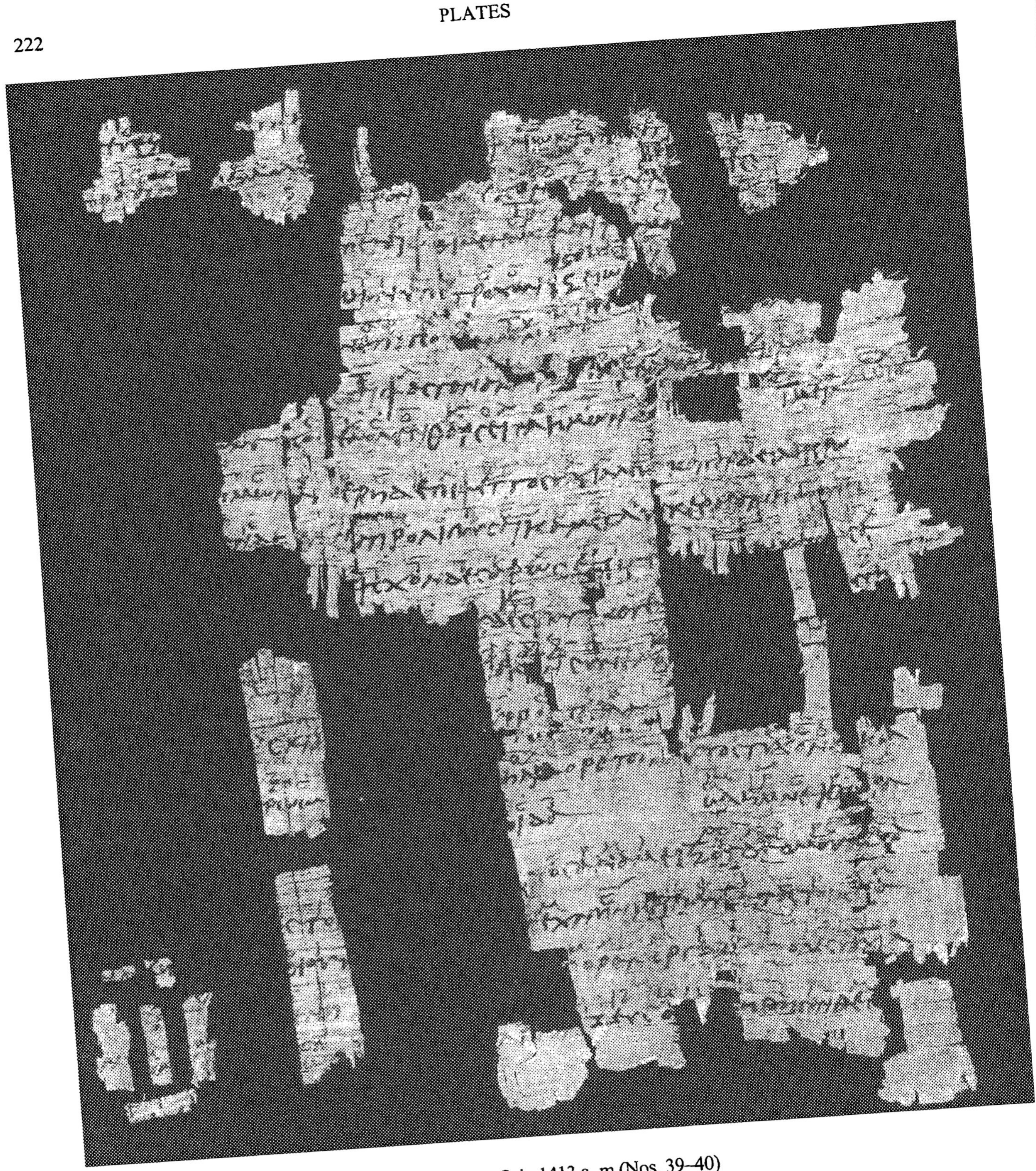

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